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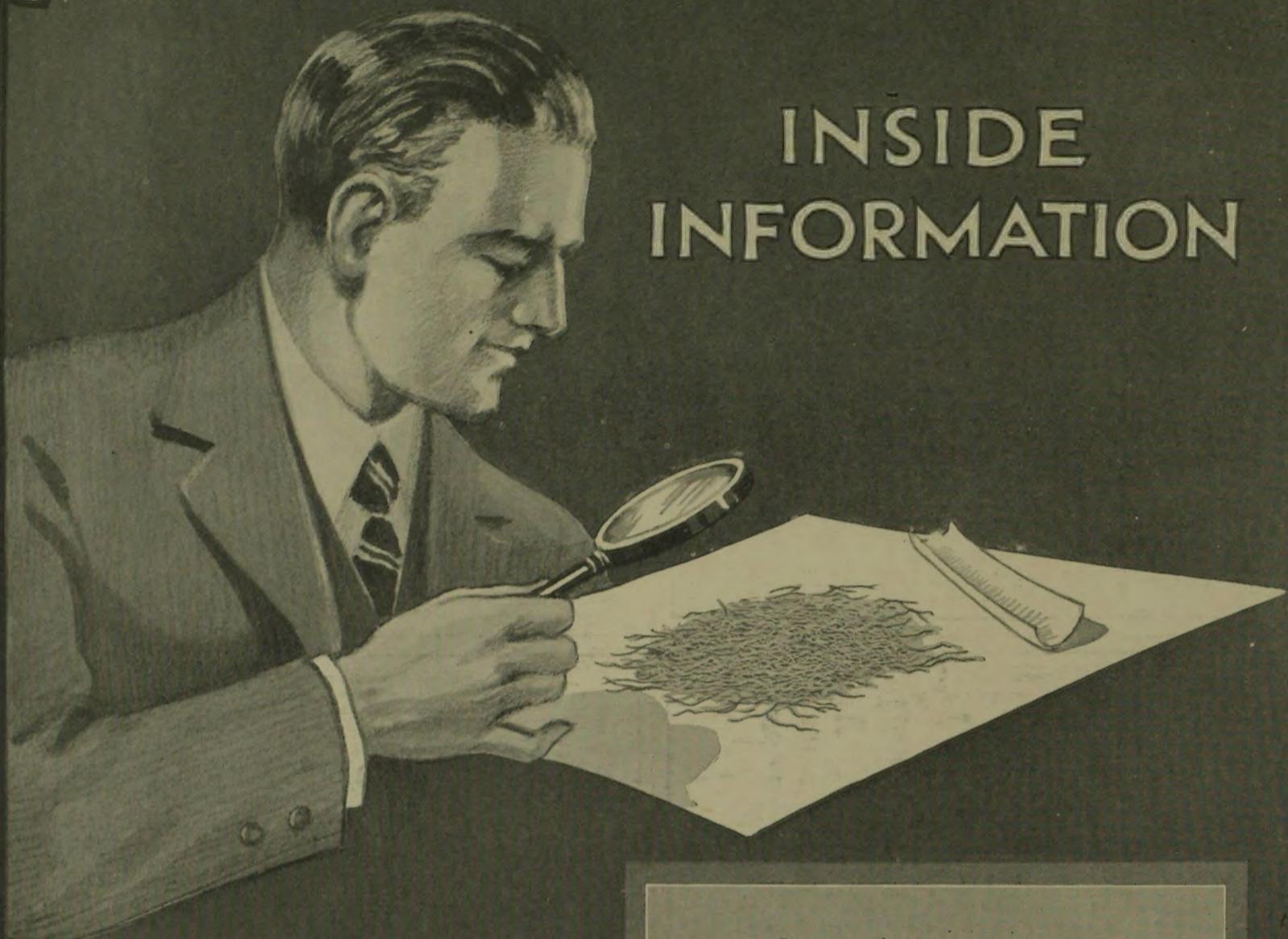
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THE ILLUSTRATED LONDON NEWS

REGISTERED AS A NEWSPAPER FOR TRANSMISSION IN THE UNITED KINGDOM AND TO CANADA AND NEWFOUNDLAND BY MAGAZINE POST

SATURDAY, AUGUST 4, 1928.

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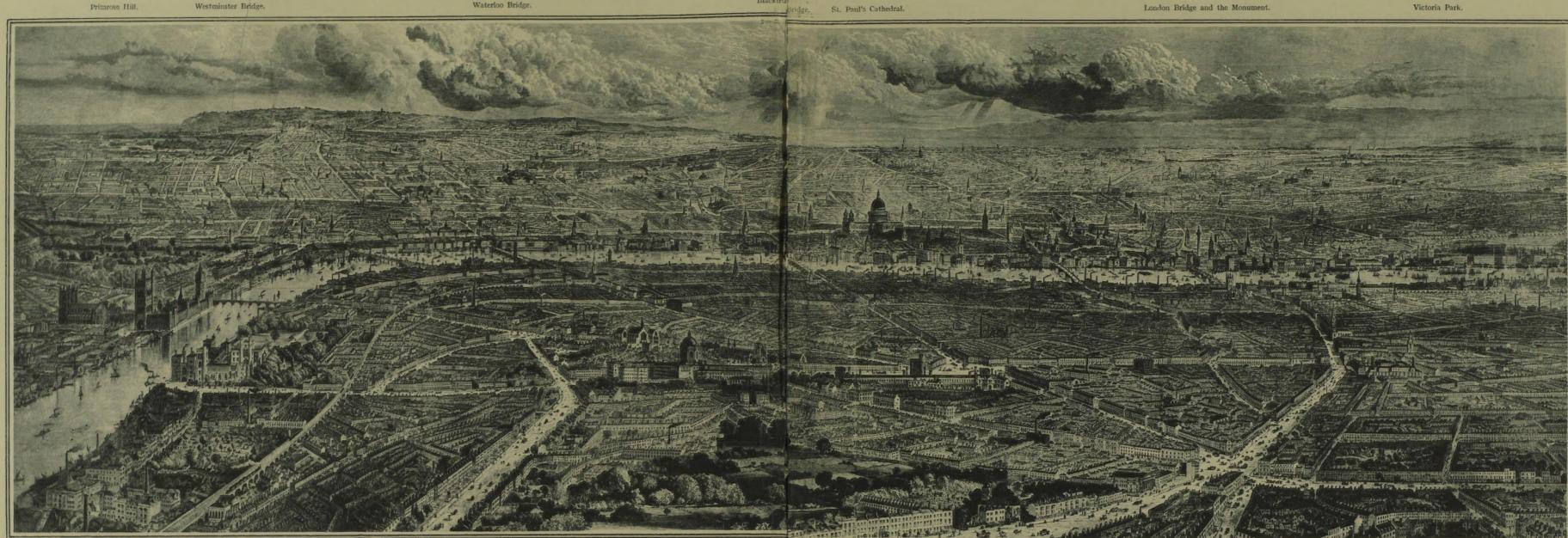


THE HOT SPELL REVEALING LONDON AS A CITY OF LIGHT AND CLEAN-CUT BUILDINGS: LOOKING TOWARDS THE HOUSES OF PARLIAMENT, THE L.C.C. BUILDING, AND THE SITE OF THE SUGGESTED NEW EMBANKMENT.

Nothing was more noticeable during the recent spell of particularly hot weather than the clarity of the atmosphere in London, a clarity which this photograph illustrates peculiarly well. Such a state of things, it need hardly be said, is the exception rather than the rule in our somewhat smoky capital, and Americans and other visitors who had heard of "Particulars," and the old joke "Our Summer was on a Thursday last year," wondered exceedingly and rejoiced accordingly. For those who do not know their London, it should be pointed out that the bridge in the foreground is Westminster Bridge. On the left is part

of the Houses of Parliament. On the right is the London County Council building, and, in connection with this, it may be remarked that, according to report, the missing wing is likely to be erected before very long. When this is done, and if the proposed new Charing Cross bridge scheme comes to fruition, it is probable that in due time the Embankment that is before St. Thomas's Hospital and the County Hall will be extended to Waterloo Bridge, and, later, further. The dome of St. Paul's Cathedral can be noted in the background, behind the L.C.C. building.

THE WOODCUT TRUER THAN THE PHOTOGRAPH! PANORAMAS OF LONDON IN THE OLD MANNER AND IN THE NEW.



Houses of Parliament. Lambeth Palace. Vauxhall Road. Bethlem Royal Hospital.
TRUER IN PERSPECTIVE THAN THE PANORAMIC PHOTOGRAPH: LONDON IN 1861—A REPRODUCTION OF THE GREAT DRAWING
WOOD-BLOCK OF THE PERIOD
Tower Bridge. St. Paul's. St. Pancras Station.

GIVEN IN "THE ILLUSTRATED LONDON NEWS" OF FEBRUARY 9 OF THAT YEAR AND PRINTED FROM THE LARGEST BOLTED
(4 FT. 4½ IN. BY 1 FT. 5½ IN.).
Elephant and Castle. New Kent Road.
British Museum. Crystal Palace. Houses of Parliament.

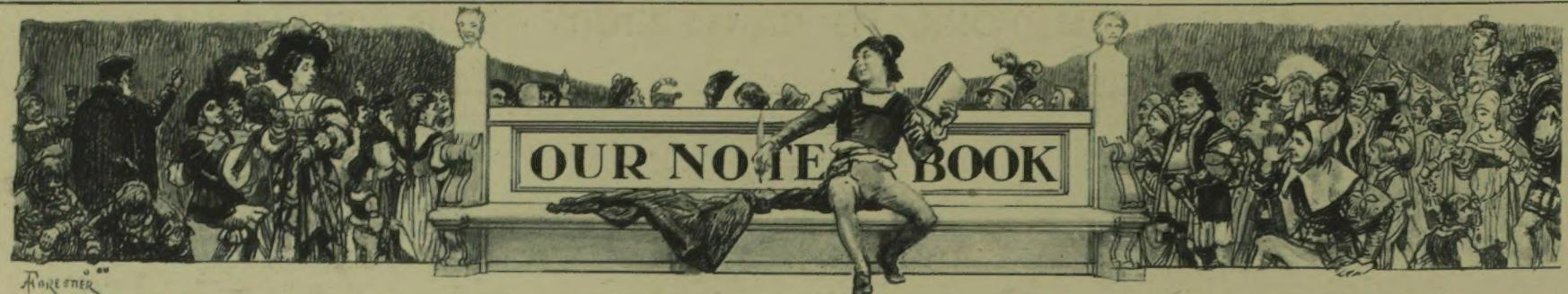


A MAGNIFICENT PHOTOGRAPH, BUT WITH AT LEAST ONE "OPTICAL ILLUSION DUE TO THE FORESHORTENING OF THE PERSPECTIVE":

London is in truth ever-changing, though it retains sufficient of its ancient glories to make it still a lodestone to attract the world. Plaques with those fatal words "Here Stood—" or, "This was the Site of—" multiply; but that cannot be helped in a progressive world, and it is at least good that the new buildings that are springing up on all sides are so worthy architecturally. The Metropolis as we showed it in *The Illustrated London News* of February 9, 1861, offers strange contrasts to the modern view we give for comparison with it, even though those views are not from the same point. In addition to this, it is of unusual interest to remark that the perspective of the artist who made the drawing for the wood-engraving is very much truer than the perspective attained by the camera, excellent as is the particular photograph here given. As we point out later in our general description of this, "close to St. Paul's (an optical illusion due to the foreshortening of the perspective) there appears the roof of St. Pancras Station." In the wood-cut there is shown in the extreme left-hand top corner New College, St. John's Wood. The hill to the right of this is Primrose Hill; and on the next summit are Hampstead Church, Highgate Church, and St. Luke's, Holloway, in that order. Almost at the extreme right at the top is Victoria Park. The Houses of Parliament can be seen on the left; with, in front of them on the opposite bank of the river, Lambeth Palace. The road in the right foreground is the New Kent Road, leading from the Elephant and Castle. From

LONDON IN 1928: A CAMERA-PICTURE TAKEN DURING THE HOT SPELL, WHEN THE ATMOSPHERE WAS OF REMARKABLE CLARITY.

the Elephant and Castle towards the City runs the Borough, towards London Bridge, at the other side of which may be seen the Monument. Towards the centre foreground are the buildings and dome of Bethlem Royal Hospital, that famous institution which is to be moved into the country. St. Paul's is rather above the centre of the picture. Near the water-front on the north side (on the left) may be seen St. John's, Smith's Square, Westminster, and above that to the right is the Abbey. Then, as we have noted, are the Houses of Parliament. Further along are Somerset House; Temple Bar, with the site of the then *Illustrated London News* office to its left; St. Bride's, Fleet Street; and, well to the right, the Tower, and St. Katherine Docks. In the panoramic photograph, which was taken by a *Times* photographer from Parliament Hill Fields, St. Paul's is seen to the left. Beginning from the left we see the Port of London Authority building close to the Tower Bridge, and the Monument. Close to St. Paul's (an optical illusion due to the foreshortening of the perspective) there appears the roof of St. Pancras Station, behind which are the buildings of Fleet Street. Further right are the Law Courts with tapering spire. In the right half are Bush House, with the spire of St. Pancras Church in front; the British Museum, identifiable by the dome of University College; St. Martin-in-the-Fields; the Nelson Column, with the Oval gasometer behind it; and, finally, the Houses of Parliament, the Duke of York's column, and the Abbey.



By G. K. CHESTERTON.

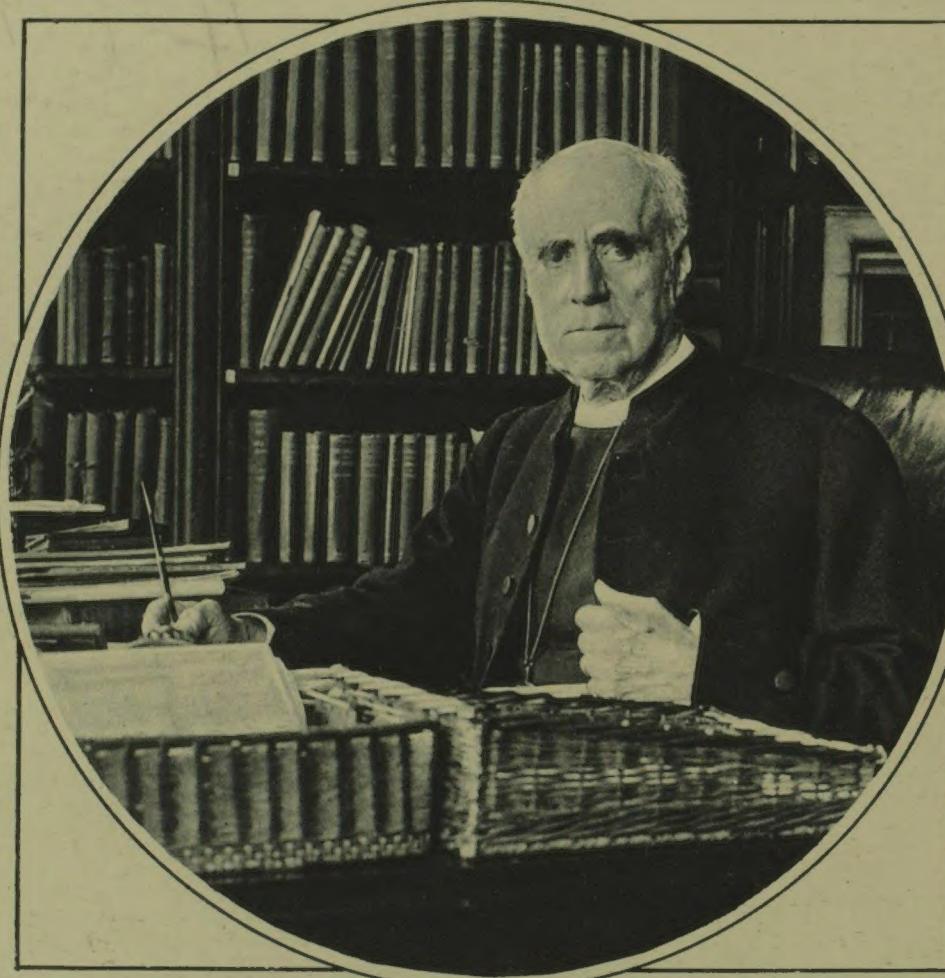
A RECENT article by Mr. Aldous Huxley, on the idea of a Liberal Education, raises some very interesting questions. It makes a much better case for what may be called utilitarian instruction than the utilitarians do. It is also all the more clear and logical because the writer is not a utilitarian. He truly says that he is the type which really likes a Liberal Education, which some describe as a mass of useless reading. From this case alone, however, we may well refuse to call it useless reading when it leads to such useful writing. Even if we accepted the more mechanical or materialistic case, we should still need logic and language in order to state the case. And a man might possibly learn to appreciate machines from a book; whereas I gravely doubt whether the most patient pupil would ever learn to appreciate books from a machine.

One of the disadvantages of telling the cobbler to stick to his last is that the cobbler never opens his mouth except to say that there is nothing like leather. Such a sentence, repeated for the eighteenth time, begins to lose something of its sparkle as a contribution to a hilarious evening. The disadvantage of merely telling specialists to specialise is that at last they do not even know that they are specialising. They reach a point where they are simply generalising. And the trouble is that you *can* describe everything merely in terms of something; you *can* colour the whole map according to leather as according to land or sea. You can make a sort of cosmos of cobblers; since most lands are familiar with roads, most roads familiar with feet, most feet familiar with boots. And that is what specialists nearly always do. The economist does not teach economics; he teaches the economic theory of history. The anthropologist does not talk about anthropology, but about whether mind can exist without matter, in face of the peculiar behaviour of a tallow candle. The anthropologist, by his researches into the habits of anthropoids, has discovered that some of them possess the power of blowing out a candle. After this experiment, the exponent of Evolution appears to remain very much where the traditional recipient of the revelation of Genesis remained after the light was similarly extinguished.

Now the cold suspicious world cannot help remarking that, when the educationist praises a course of education, it is generally that by which he himself can be considered an educated man. It is the cobblers who think the cobbling culture is everything; the anthropologists who think the anthropological culture is everything; the economists who think economics are everything. Therefore do I salute the delicate and magnanimous conduct of Mr. Aldous Huxley, in recommending reforms by which he himself would never have benefited; in removing the special distinction of things in which he is himself distinguished; in avowing that he is a man of books, and yet warning the world against bookishness. But there are other and rather curious results that might flow from his disinterested protest; and one at least of which I imagine he has thought, but I am not sure whether he would approve. His main

position is the not unfamiliar one that a boy should be trained according to the trade for which he has an aptitude. Of course, there is some danger of arguing in a circle here. It is difficult to be quite certain where his aptitude is until you have at least tried to train him in several different things. It is even difficult to tell whether he is likely to have any aptitude, beyond that of a deaf and dumb imbecile, until you have given him some general culture and conception of the world around him. But, passing that as mainly a matter of proportion, it is true enough that, while some people like thinking as Mr. Huxley does, a good many people positively seem to hate thinking; or, at any rate, thinking about theoretical as apart from practical things. On this distinction he seems inclined to base an educational division,

and that the intellectual faculties are uniformly distributed throughout the race"; which seems to me a little hard on Democracy. Very few modern democrats would say, in so many words, that democracy was founded on that. But then, very few modern democrats can tell you what democracy *is* founded on, if it is not founded on that. That is called being free from the fetters of Dogma; and it means holding opinions without knowing why. In this respect there is little to choose between Democrats and Darwinians and Fundamentalists and Reactionaries and all the rest. As a matter of fact, the true origin of democracy is very curious. Democracy is an orphan; either a child deserted by its mother or a child that ran away from its nurse. Perhaps there was a sort of allegory about that baby left on the doorstep by Rousseau, the maker of the modern democratic idea. Religion is the only possible root of this idea of an invisible sanctity or dignity, belonging equally to all the different sorts of men. It is obvious that men have not got a mental or material equality. If they have a moral equality, it can only be a mystical equality. Yet it is undoubtedly true that when this lost child of faith first came into the modern world, he fought furiously against his parent; like Sohrab against Rustem. In Bolshevism, and similar things, we are watching a crazy contradiction, in which the ideal of equality is extended more and more extravagantly, while the only reason for equality has been flung away. But this has also a reference to Mr. Huxley's particular point about education.



A MEMORABLE PRIMACY ABOUT TO END: THE MOST REV. RANDALL THOMAS DAVIDSON, ARCHBISHOP OF CANTERBURY, WHOSE RESIGNATION WAS RECENTLY ANNOUNCED.

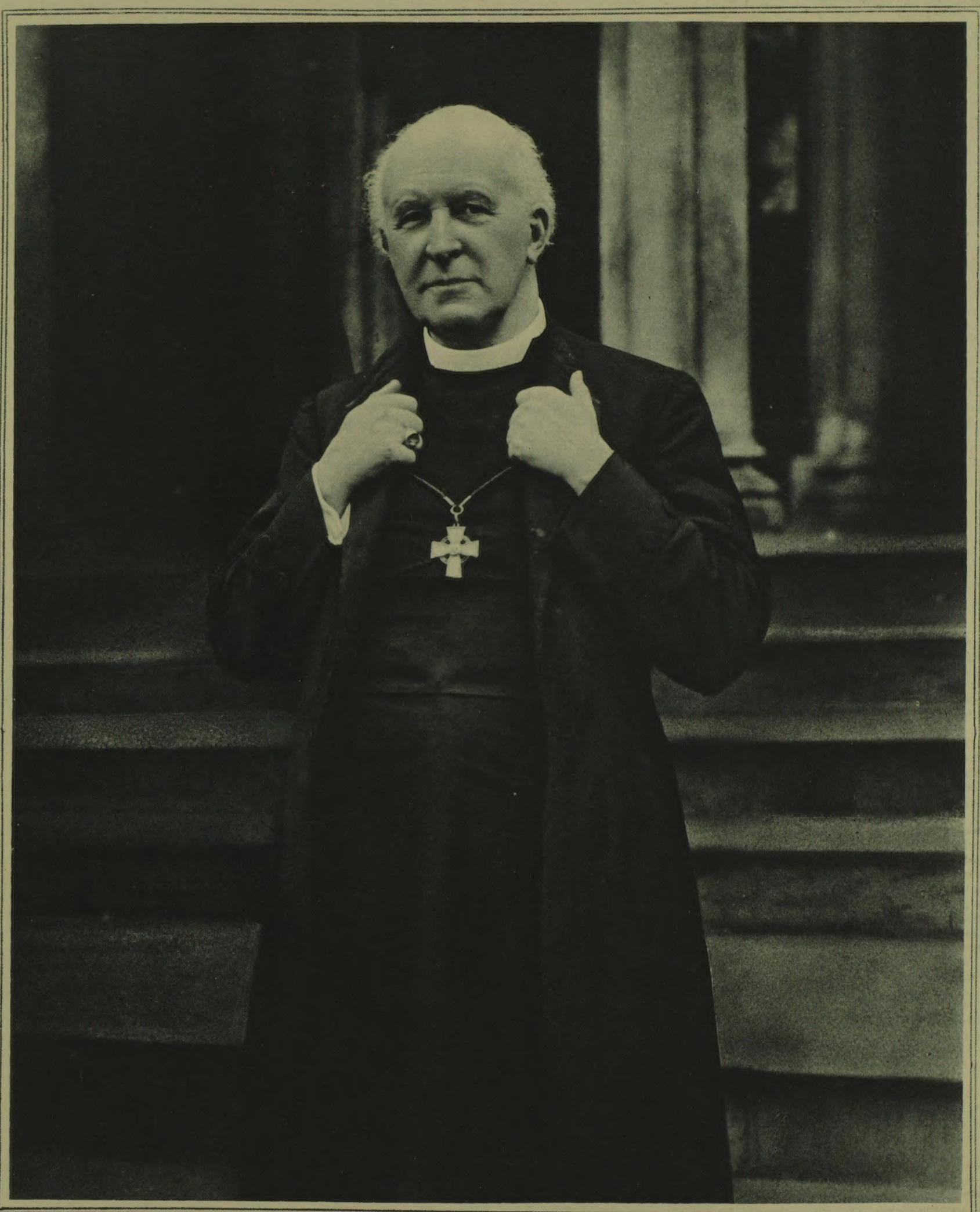
Dr. Randall Davidson, who has just completed his twenty-fifth year as Archbishop of Canterbury, recently tendered his resignation, which has been accepted to take effect on November 12. This year he has also celebrated his eightieth birthday and his golden wedding, and a movement is on foot to offer him a public tribute. Dr. Davidson was born in 1848, and in 1878 he married Edith, second daughter of Archbishop Tait of Canterbury, to whom he was chaplain and private secretary. From 1883 to 1891 he was Dean of Windsor and Domestic Chaplain to Queen Victoria. From 1891-5 he was Bishop of Rochester, and from 1895 to 1903 Bishop of Winchester. During the last few years he has been the leading figure in connection with the new Prayer Book Measure. In the words of his successor at Canterbury, Dr. Lang (of whom a portrait appears on page 201): "We shall remember with gratitude the record of his long and distinguished and unceasing service to the Church and nation."

by which some would have a practical education and others a theoretical education, or what is commonly called a liberal education. As he has himself made much better use of a liberal education than I ever did, it will be unnecessary to remind him of a historical or philosophical parallel. But surely this is extraordinarily like the old pagan distinction (allowed to some extent, I fancy, by Aristotle) between the idea of the Slave who is to learn useful arts, and the Free Man who is lucky to learn only useless ones.

He begins his article by saying, "Democracy is based on the theory that human beings are equal,

want to sketch or botanise. But it is not unpractical that everybody should know (if it can be known) how the wreck went down, whether it is recoverable, what are the latitude and longitude of the island, in what course of ships it lies, what sort of signals will bring them, and so on. If there is no such knowledge, no such hope, no such help, there is an end of it, of course. But it was not stupid, in people who believed there was, to teach the same story to everybody. Everybody, theoretical or practical, was a character in the story. And, like the people on the desert island, they all wanted to be saved.

TRANSLATED FROM YORK TO CANTERBURY: THE NEW PRIMATE.



CHOSSEN TO SUCCEED DR. DAVIDSON AS ARCHBISHOP OF CANTERBURY:
THE MOST REV. AND RIGHT HON. COSMO GORDON LANG, D.D.

Dr. Cosmo Gordon Lang, whose nomination to the Primacy in succession to Dr. Randall Davidson was announced on July 27, has for the last twenty years been Archbishop of York. He was born in 1864, a son of the late Very Rev. John Marshall Lang, then Minister of Fyvie, Aberdeenshire. From Glasgow University he went up to King's, Cambridge, but at the end of his first term won a scholarship at Balliol, Oxford. There he became President of the Union, took a first in History, and was elected a Fellow of All Souls. He at first read for the Bar, but three years later he abandoned the Law and in 1890 was ordained. After

a curacy at Leeds he returned to Oxford in 1893 as Fellow and Dean of Divinity at Magdalen, and the next year became Vicar of St. Mary's. In 1896 he was appointed Vicar of Portsea, and from 1901-8 was Suffragan Bishop of Stepney and Canon of St. Paul's. By that time he had made a great reputation as a preacher, and had shown exceptional ability in appealing to industrial communities. He has since increased his fame by his work at York, his preaching in Canada and the United States during the war, his chairmanship of the Lambeth Conference Committee in 1920, and his support of the new Prayer Book Measure.

The Scientific Side of the Detection of Crime.

No. VII.—FORGERIES AND THEIR DETECTION.*

By H. ASHTON-WOLFE, Assistant Investigator under Dr. Georges Béroud, Director of the Marseilles Scientific Police Laboratories.

IN the Middle Ages philosophical treatises, alchemists' formulas, and esoteric theories were so travestied by erasures and additions that they could be used by the fanatics of the time to prove the heresy of those whose beliefs clashed with the teachings of



SHOWING HOW THE FORGER, HAVING TO WRITE SLOWLY, PRODUCES LETTERS THAT WAVER: AN ENLARGEMENT OF A FREEHAND FORGERY, TO INDICATE CHARACTERISTIC WAVERING AND RE-TOUCHING.

the Church. Modern chemistry has exposed many of these frauds by rendering bleached or erased writings visible. Thus, under ancient Latin versions of the Bible were found: a thesis of Cicero in defence of Roscius of Ameria; unknown pages of Pliny; fragments of the Theodosian code, dissertations by Euripides, and so on. Since then, of course, the art of the forger has progressed to such an extent that the experts in the numerous police laboratories have been compelled to devote much time to the elaboration of instruments and methods capable of dealing efficiently with this subtle branch of crime. The forger has realised that the success of his labours depends on a thorough study of the two basic factors of the written word: the paper and the ink!

Paper is made of many substances, but there is one important operation in the manufacture of writing paper which is a constant menace to the forger, and that is the glazing. Glazing is indispensable if the paper is to be homogeneous, and if it is not to absorb the ink as blotting-paper does. The danger of this glazing to the forger is obvious. It is to the artificial surface that the ink adheres, and the chemicals he uses to bleach or efface writing naturally attack and dissolve the glaze, exposing the absorbent surface of the actual fibres of which the paper is made. Were he to write on this the ink would spread as it does on blotting-paper. His first care, therefore, after effacing the ink, is to cover that part with a substitute for the original glaze. For this he uses flour paste; resin, heated and dissolved in alcohol; fecula and alum, or a mixture of soap, powdered resin, and alum dissolved in warm water. These substitutes for the original dressing are applied with a tiny brush where the razor has shaved away the ink or where the bleaching has eaten into the texture. A hot iron is then passed over the whole surface of the paper. Care and practice are essential, but the expert forger is a master in these details. Since erosion also diminishes the thickness of the paper, the application of paste or resin levels the hollows. When it is thoroughly dry, the forger fills in the blanks with a pen and ink similar to that with which the remainder of the text was written. There is another detail as important as the glaze. This is the colour of the paper. Most of the commercial types are treated with cobalt in order to neutralise the yellow tinge of the fibres; since blue added to the yellow cellulose causes the paper to appear white. Unfortunately, cobalt is not easily deteriorated by acids or alkalis, whereas mauve, pink, or cream paper at once loses its colour.

The first care of the expert when a document is submitted to him is to discover the type of forgery with which he is dealing. These types have been carefully classified and analysed. Freehand forgery is not widely practised except for imitating a mere signature.

The reason is obvious. With the exception of a gifted few, it is almost impossible, without long and arduous practice, to imitate another's handwriting so perfectly that the document will pass muster. The modern investigator completes the up and down strokes by ruled lines several inches long. The document is then enlarged, and the slopes are compared with an authentic specimen. The angles are also measured by very sensitive instruments. The forgery thus immediately becomes apparent. Furthermore, no matter how skilful the criminal, he is compelled to write slowly, and thus

towards the end of the word or phrase; others do the opposite. Some begin heavily and finish lightly; some vary the slope. It is obvious that if words are taken here and there and exactly copied to form a sentence, none of these characteristics will be continuous.

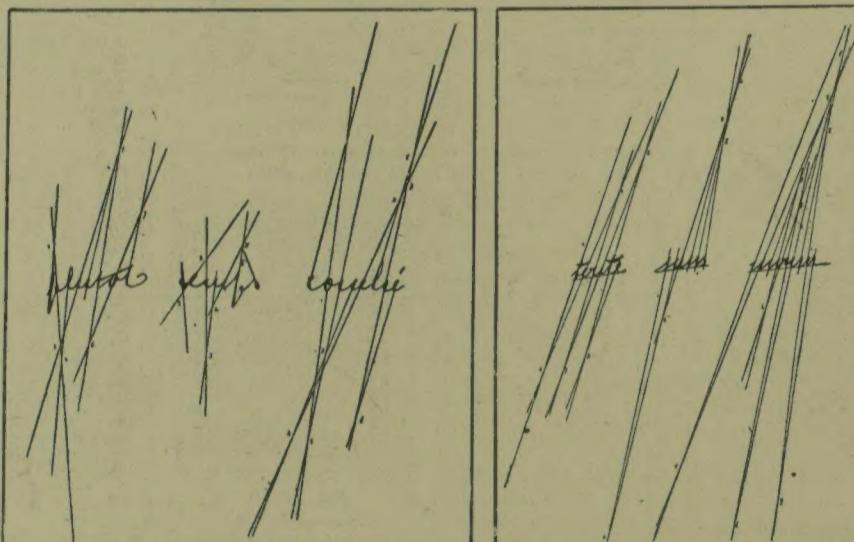
A method which cropped up for the first time in Geneva was much more ingenious, and at first deceived the experts. This is the cut-out-letter trick. A notary named Guyard had determined to cheat his brother's family of their inheritance when the brother died. To this end he collected countless letters, from which he cut the words he needed to compose a will in his favour. These words were stuck on a blank sheet and photographed. Unfortunately, he went to an adroit but unscrupulous engraver, who lithographed the will, using a certain kind of ink, and produced a perfect document which was accepted as authentic by the Courts. But the engraver thereupon began to blackmail the dishonest notary. His demands became so exorbitant that at last the notary refused to pay. When the engraver realised that nothing further was to be obtained, he fled the country, but before doing so sent blocks, model, and proof-sheets to the police. The notary was sentenced to ten years' hard labour. Since then this method has been used again and again in various ways, but the laboratories are now on their guard, and, by applying the same tests as in the case of traced documents, can im-

mediately render the forgery evident. Furthermore, the variation in the size and vigour of the words is an infallible means of proving that a forger has been at work.

Much more dangerous are the criminals who erase or bleach words here and there, and fill in the blank spaces thus produced by carefully chosen words or phrases which completely transform the original meaning. It would take too long to go into the history of ink, but it is very, very ancient. The first kind was Chinese or Indian ink. This is made of lampblack, vegetable carbon, or the colouring matter of the squid, mixed with gum to render the substance homogeneous. Later, inks composed of iron, tannin, and logwood were discovered. Modern inks are still manufactured of these substances, although many of them contain a small proportion of aniline dye.

Permanganate of potash, acidulated by a few drops of sulphuric acid, completely bleaches mineral inks, but stains the paper yellow. This tinge is eliminated by sodium sulphite or metabisulphite. Chlorine, oxalic acid, and other

[Continued on page 232.]



A METHOD OF CHECKING SLOPES AND ANGLES OF WRITING, AND THUS REVEALING FORGERY: THE UP AND DOWN STROKES LENGTHENED BY RULED LINES—A PART OF THE AUTHENTIC HANDWRITING WITH THE LINES GIVING THE SLOPES (THE ILLUSTRATION ON THE LEFT); AND A PART OF THE FORGED HANDWRITING, SHOWING THE DIFFERENCES IN THE SLOPES AND ANGLES (RIGHT).

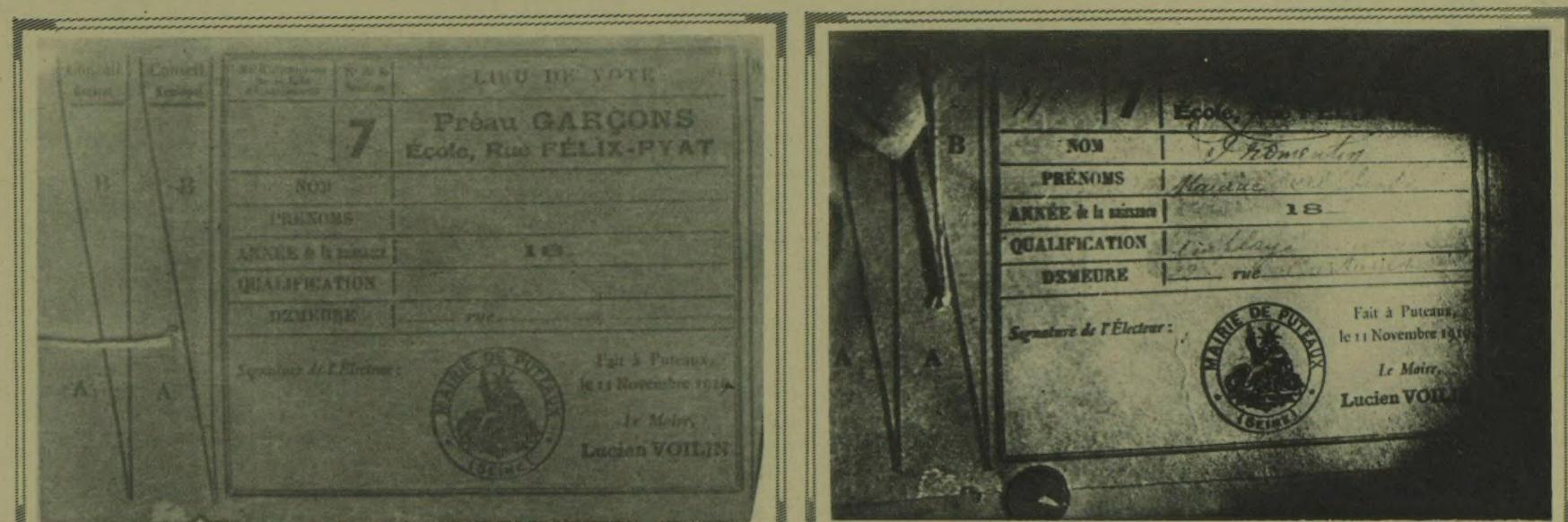
causes the letters to waver very slightly, but just enough for the microscope to reveal it. And there is the retouching. A forger always improves the shape of certain letters, and this retouching becomes very apparent under a powerful lens. A better method is the traced forgery. Naturally, in order to imitate another's writing the criminal must obtain letters or documents written by the person he intends to defraud. He attaches several of these against the under-side of a pane of glass placed in an arrangement similar to a photographer's retouching desk, fixes a sheet of paper on the upper side, and illuminates both by transparency. He then traces the words necessary for his faked document from the originals, until he has the complete text. This trick was formerly efficient, but to-day it is a simple matter to expose it. Words taken here and there do not fit in when enlarged. We all have our characteristics. Some people begin with longer and more accentuated letters and dwindle



USED TO REVEAL INK THAT HAS BEEN COVERED WITH OTHER INK: THE CHROMOSCOPE, BY WHICH ANY DESIRED COLOURS CAN BE ELIMINATED. If the criminal, in altering a document, covers the original ink with an ink not absolutely of the same colour, the chromoscope in the hands of the police scientists comes into play. There are four lenses to this—three of them with colour-screens and the other without a screen. The colours from the individual lenses can be so combined that any tint can be produced, and when the tint is correctly chosen it will eliminate the covering ink as required and reveal

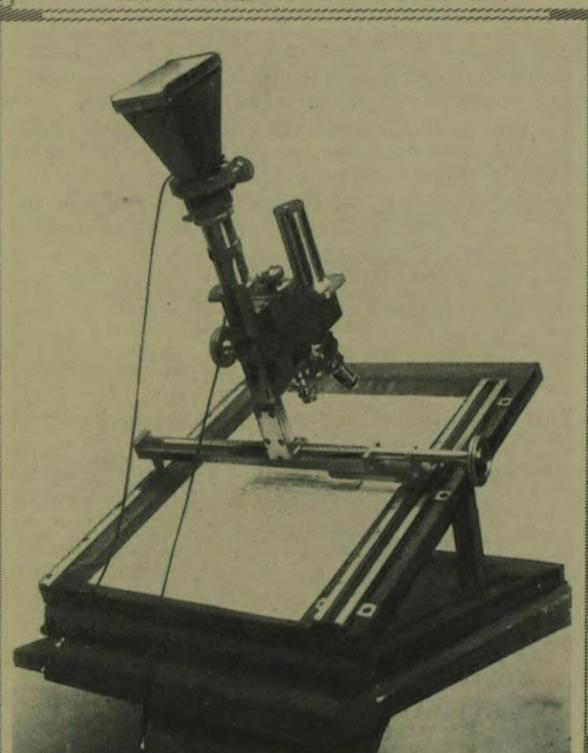
"the ink beneath it. The principle of this is given in our article.

SCIENTIFIC DETECTION: "WHISTLING" AND OTHER TESTS FOR FORGERY.

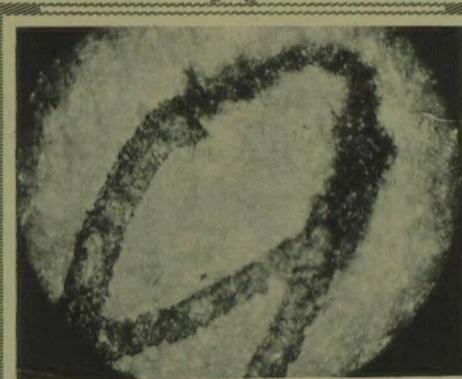


A DOCUMENT APPARENTLY INNOCENT OF HANDWRITING; BUT, IN REALITY, ONE THAT HAD BEEN BLEACHED FOR THE REMOVAL OF THE WRITING INK.

THE SAME DOCUMENT SO PHOTOGRAPHED THAT THE HANDWRITING (APPARENTLY BLEACHED OUT) HAS BEEN MADE TO REAPPEAR.



THE MICRO-CAMERA WHICH IS SPECIALLY EMPLOYED BY THE SCIENTIFIC INVESTIGATORS AT THE LYONS POLICE LABORATORY FOR THE DETECTION OF FORGERIES.



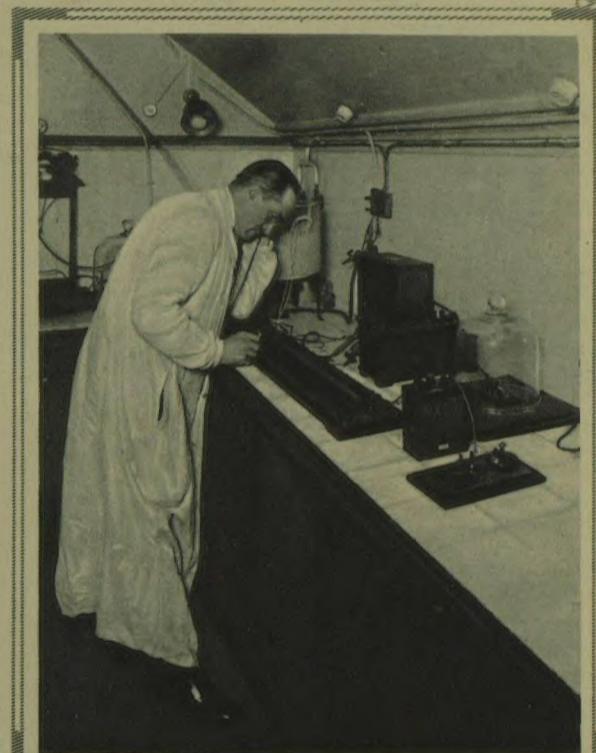
THE INVISIBLE MADE VISIBLE: A FIGURE BLEACHED OUT OF A DOCUMENT MADE APPARENT AGAIN BY THE CAMERA.



A STAMP ON A LETTER, WITH A VERY FAINT POST-MARK SCARCELY TO BE SEEN.



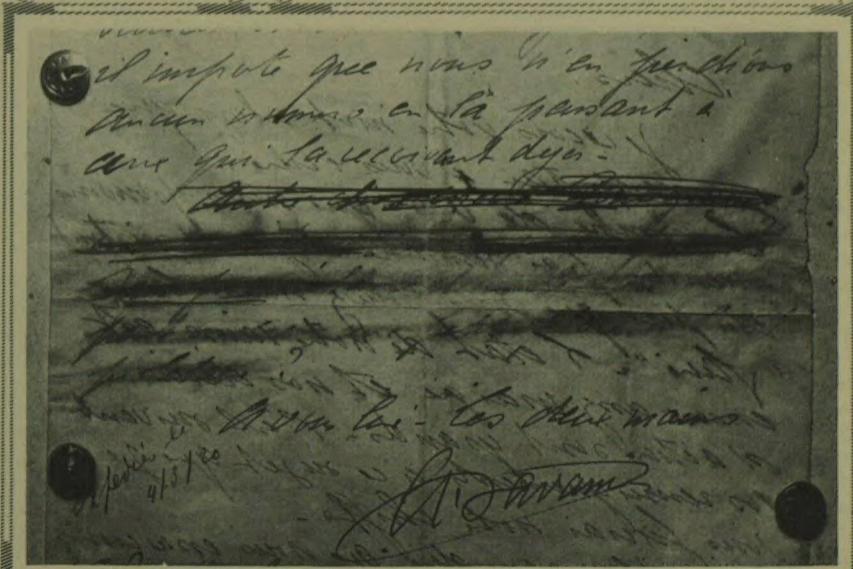
THE STAMP ELIMINATED BY THE CHROMOSCOPE—"BAU" (PART OF BAUVAS) READABLE.



AN ELECTRICAL APPARATUS WHICH REVEALS FORGERIES BY CHANGES IN THE WHISTLING VIBRATIONS SET UP BY THE OHMIC RESISTANCE OF PAPERS AND INKS.



A DOCUMENT WITH LINES EFFACED BY MEANS OF HEAVY STROKES—BEFORE SUBMISSION TO THE CHROMOSCOPE FOR THE ELIMINATION OF THE COLOUR OF THE EFFACING INK MARKS, TO REVEAL THE WRITING UNDERNEATH.



A STAGE IN THE CHROMOSCOPIC EXAMINATION OF THE DOCUMENT—THE EFFACING LINES SO ELIMINATED WITH COLOUR SCREENS THAT, WHEN THE DOCUMENT WAS ENLARGED, THE HIDDEN WRITING WAS REVEALED.

In the article opposite, Mr. Ashton-Wolfe describes some of the ways of the forger, and some of the means police scientists use to defeat him. Needless to say, the microscope plays a very important part; and at least as much value may be attached to the employment of special cameras and the use of that system of tinted screens by means of which desired colours may be eliminated so far as the human eye is concerned. The whole subject is dealt with so fully in the article that there is no need for us to discuss it further here; but attention may be drawn to one of the illustrations in particular—that showing the electrical

apparatus which reveals forgeries by changes in the whistling vibration set up by the ohmic resistance of various papers and inks. Of this Mr. Ashton-Wolfe says: "The latest and most conclusive of demonstrations is obtained by a species of electrical apparatus combined with a loud-speaker and wireless valves. . . . The ohmic resistance of the normal paper and ink produces a definite musical sound. When the maximum has been determined by a sliding rheostat, the current is passed through the suspected part. A difference so minute that no other method could reveal it at once produces a change in the whistling vibration."

The World of the Kinema.

By MICHAEL ORME.

MIRROR MAGIC IN KINEMATOGRAPHY.

OF all the many-sided interests attached to the great World of the Kinema, none is, I think, more fascinating than the new inventions that from time to time revolutionise the technique of film-making and open door after door to possibilities of fresh magic for kinema-goers. Yet it is extraordinary how little is really known of such things outside the studios. We hear a great deal about the star actors and actresses; about their private lives, the clothes they wear, the cars they buy, what they like to eat, who is just married or divorced. For the cynicism that "some are born great, some achieve greatness, and some have good Press agents," is a truer axiom in film-land than in almost any other walk of life. We can read, also, columns of description aenent the personality of this or that popular director—how he

inaccessible depths of mine or tunnel, or the highest tower, with a minimum of labour and expense; whereas in the old days, if a scene were to be staged in front of, say, the Opera House in Vienna, it was necessary either for the actors to make a special journey to the town itself, or for a lifesize reproduction of the part of the elevation required to be erected in the studio. Days, and sometimes weeks, were spent in what, from a County Council's point of view, might have been described as "jerry-building," but which, in the completed film, had all the appearance of solidity and verisimilitude. But the cost was often inordinate.

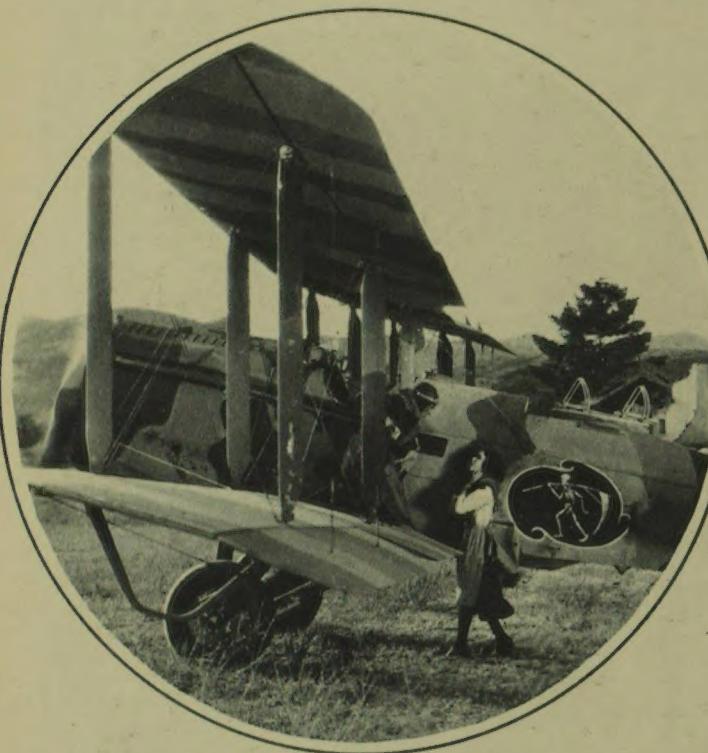
With the coming of the Schufftan method, it is now only necessary to build the required set up to the height at which the action is taking place, the upper parts

being photographed from a miniature model—or even a photograph—with the aid of a mirror interpolated between the camera and the scene, at a given angle to the axis of the lens. By removing part of the mirror-foiling, the action that is taking place in front of the camera becomes visible, and the two scenes combine to form a perfect whole.

Those of my readers who saw "Madame Pompadour" and "Metropolis"—to mention only two of the well-known pictures in which this device has already been successfully employed—will remember, in the former, the great staircase, only a fraction of which was actually built in

the studio, the remainder being photographed in the manner just described. And in "Metropolis" the

enormous monument, as well as others of the stupendous sets in that technically marvellous film, were treated in the same way. The originator of this remarkable invention, Eugene Schufftan, a German,



AKIN TO "WINGS": "THE LEGION OF THE CONDEMNED," AT THE PLAZA—THE AEROPLANE WITH THE SIGN OF DEATH AND THE SCYTHE.

piloted his company through wastes of snow or desert; his method of inducing genuine tears in a naturally cheerful heroine; his superhuman patience.

But little, if anything, is written, except in the definitely "trade" papers, about the actual machinery concerned in the making of a film, or the technical devices employed to produce the scenic or pictorial effects that delight millions of kinema patrons all the world over. Even the legend "Photography by —" in the opening flashes of a new picture receives but cursory attention, and I dare wager that not one in a hundred of an average audience could recall the name of the camera-man at the end of the third reel.

There is, of course, something to be said for this attitude of mind. Many people argue that a knowledge of the technical side of film production would but lead to the destruction of illusion; just as the grown-up's understanding of the human mechanism that controls the antics of a "Punch and Judy" show destroys the wonder of joy and fear with which it is invested in the eyes of a child. "Where," they say, "is the thrill of watching the hero hang by one hand from the top storey of a sky-scraper, while the traffic seethes beneath him, when it is remembered that the scene is a faked one, and that, in reality, he is suspended but a few feet above the floor of the studio?" But to those whose interest in the kinema is not confined to the merely sensational or emotional sides, who realise the immense possibilities of the film not only as a means of entertainment, but as an art, unique in conception and development, some insight into the actual mechanics of its newest technique may be of interest.

Of all the inventions that have evolved since kinematography first found its feet upon the ladder of popularity, that which is now known as the "Schufftan Combination Method" is one of the most remarkable. By this method it is now possible to reproduce the largest and most imposing building, the most



THE FILM VERSION OF TOLSTOI'S "ANNA KARENINA," AT THE TIVOLI: ANNA RETURNS ON HER CHILD'S BIRTHDAY, WITH A PRESENT OF TOYS—MISS GRETA GARBO AS ANNA.

is a painter by profession. Already he has patented the device and formed companies for its exploitation in Germany, France, and, just recently, in England, where work in the Elstree studios on films in which it is to be employed is in full swing.

But, apart from the commercial value of the method, which is to be found in its cost-reducing properties, the artistic possibilities that it opens up are almost bewildering in their magnitude. No longer will it be necessary for the harassed scenario-writer or producer to decide despairingly that the Roman Forum, the scene in moonlight beneath the Pyramids, the vision of the Taj Mahal, which their story demands, must be ruthlessly cut out because of the cost. Here, as if with the wave of a magic wand, can be conjured up any of the wonders of the world, and at a figure which is but trifling compared with that of the old method. What vistas, too, it opens up in the realm of film pantomimes, should the day of such entertainments for youthful as well as grown-up children ever arrive! For, by the use of an extra device known as the "combined mirror," it is possible to vary the proportions of the component scenes one to another, so that actors of ordinary size can play the parts of giants and dwarfs in the same picture.

But there is, I think, a more far-reaching effect still which the introduction of this method should have upon an aspect of screen art that has, up to the present, been but little developed. I mean its educational side. Take history, for example, or the great legends of literature or folk-lore. It is not difficult to conceive the staging of such scenes as the invasion of the Spanish Armada, the story of Old London, the Crusades. I have no space to mention the endless subjects that could be dealt with in an accurate and inexpensive manner. To my mind, not the least of the virtues of the Schufftan method is that, with its aid, we ought to be able to take a forward step in the direction of that long postponed objective—a Children's Kinema, where films of instruction treated without pedantry, fairy-tale, and legend will help to counteract the harmful influence of much that is at present displayed before those who are too young to discount either the story or its method of presentation.

ANTHONY ASQUITH AS DIRECTOR.

One hopes that Mr. Anthony Asquith's first attempt as a film director will not be his last. Not because I think "Underground"—which had its premier private showing this week—a masterpiece: quite frankly, I found it, in some ways, chaotic. But because one feels that when he has, to some extent, set his cerebral house in order and realised that the primary function of a good film is to tell a coherent story, he will do so much better. That he has qualities



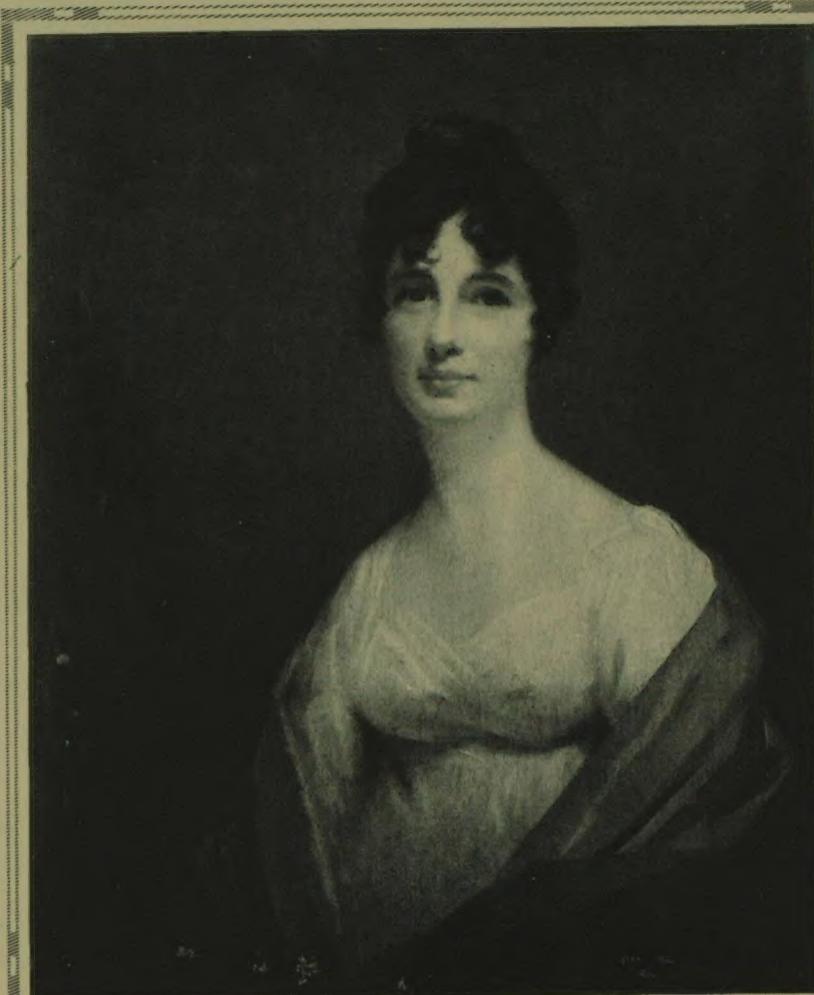
SIR HARRY LAUDER AS FILM ACTOR: THE FAMOUS SCOTTISH COMEDIAN AS SANDY McTAIVISH IN "AULD LANG SYNE."

"Auld Lang Syne," a new Welsh-Pearson-Elder film, is being taken at Cricklewood.

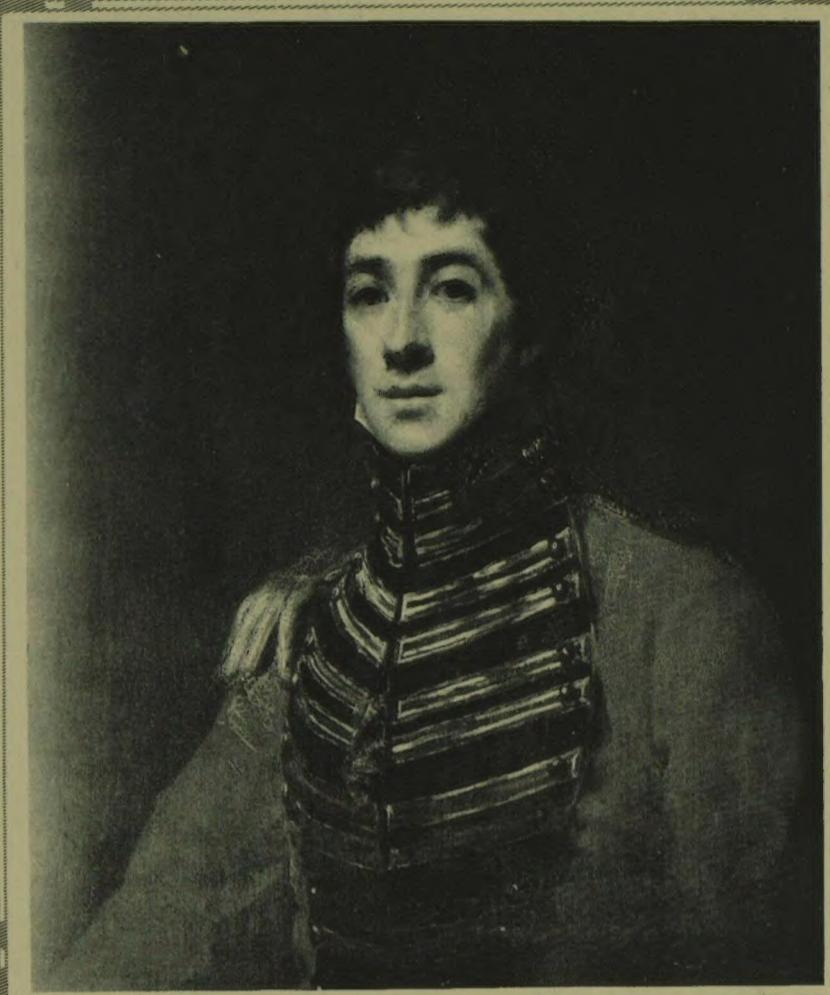
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UNRECORDED RAEBURNS FROM A HOUSE LET FURNISHED REALISE £18,375.

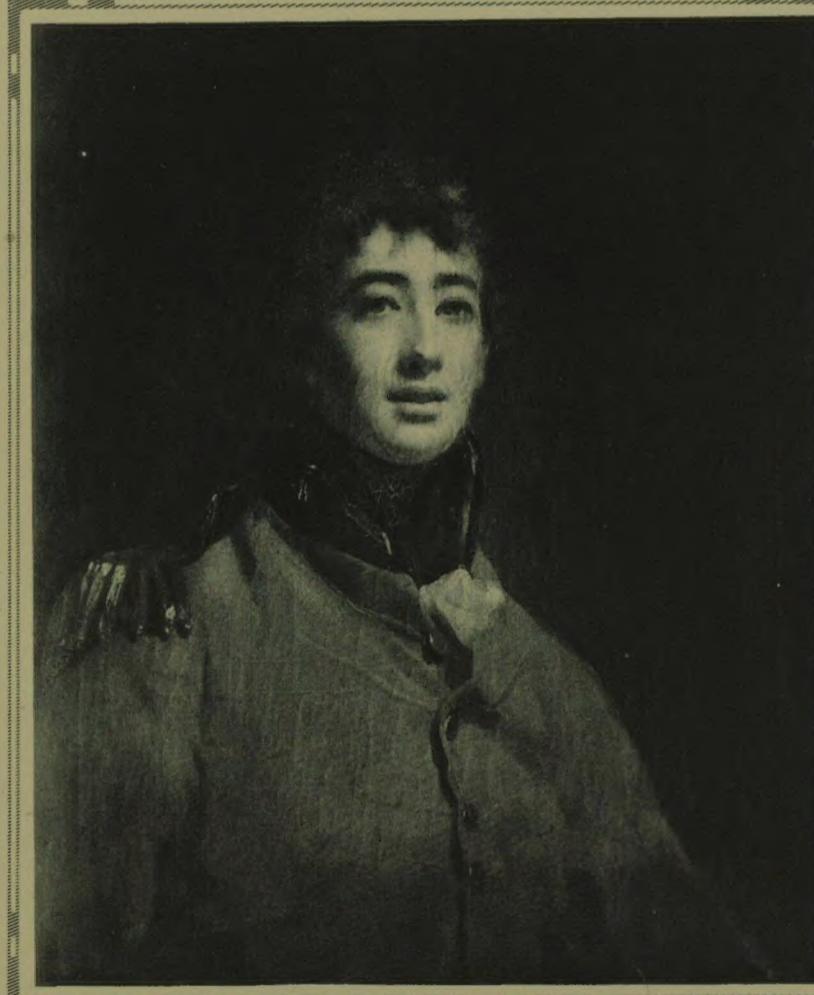
BY COURTESY OF MESSRS. CHRISTIE, MANSON AND WOODS.



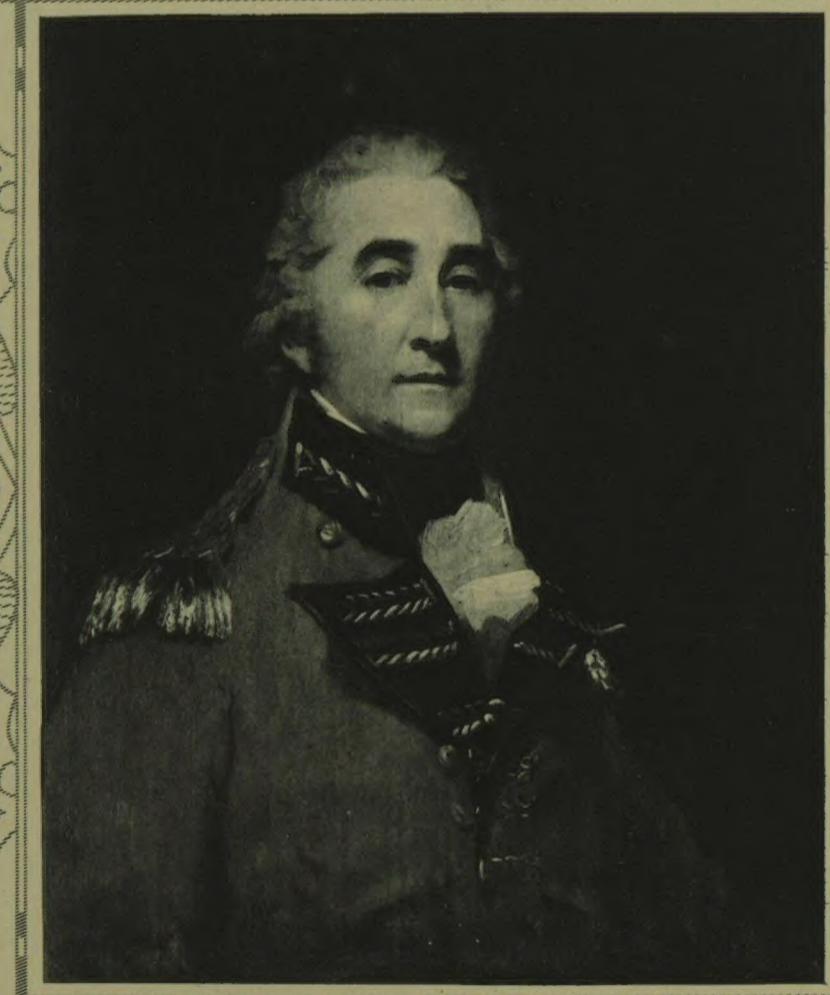
RAEBURN'S PORTRAIT OF MRS. DIROM, WIFE OF LT.-GEN. ALEXANDER DIROM (1797-1830), OF MOUNT ANNAN, DUMFRIES-SHIRE: A NOTED SCOTTISH BEAUTY OF HER DAY.



RAEBURN'S PORTRAIT OF CAPT. ALEXANDER DIROM (1800 TO 1857), LT.-GEN. ALEXANDER DIROM'S SECOND SON, WHO SERVED IN THE EAST INDIES AND NORTH AMERICA.



RAEBURN'S PORTRAIT OF COL. PASLEY JOHN DIROM (1794-1857), ELDEST SON OF LT.-GEN. ALEXANDER DIROM: A GRENADIER GUARDSMAN WHO FOUGHT AT WATERLOO.



RAEBURN'S PORTRAIT OF LT.-GEN. ALEXANDER DIROM (1757-1830), OF MOUNT ANNAN, DUMFRIES-SHIRE, WHO SERVED AGAINST TIPPOO SULTAN AND WROTE AN ACCOUNT OF THE CAMPAIGN.

These fine family portraits by Sir Henry Raeburn, R.A., included in a sale at Christie's on July 27, realised no less than £18,375, the sum paid for them by Messrs. Knoedler and Co., of Bond Street. They possess a special interest from the vicissitudes of their history. For one thing, they are entirely unrecorded in any of the books on Raeburn's work and have never been exhibited. They hung in the Dirom family residence at Mount Annan, Dumfries-shire, for many years during which the house was let furnished, and for some time after it was vacated, about 1914-15, and remained unlet. Then it was taken by a new tenant who brought his own furniture, while that of the owner, including the four Raeburns,

was removed to a house in Kent. More recently they were transferred to Putney. About two years ago a big fire occurred at Mount Annan and the tenant's furniture was destroyed. Thus by a remarkable chain of circumstances the portraits were preserved. Until the sale they formed part of the estate of General Alexander Dirom's great-great-grandson, a boy now in Canada. All the pictures measure about 30 in. by 25 in. They represent Lt.-Gen. Alexander Dirom, his wife and two sons. Mrs. Dirom (*née* Magdalene Pasley) was first cousin to the beautiful Mrs. Scott-Moncrieff, whose portrait by Raeburn is in the National Gallery at Edinburgh.

THE WORLD OF SCIENCE.

THE BAY-WILLOW.

By W. P. PYCRAFT, F.Z.S., Author of "Camouflage in Nature," "The Infancy of Animals," "The Courtship of Animals," etc., etc.

TO the little patch of ground which I call my garden there came, all uninvited, but very welcome, a few plants of the stately narrow-leaved willow-herb, or bay-willow (*Epilobium angustifolium*). I give its Latin name for the sake of those who may wish to look it up in some text-book of botany. Today it forms a dense thicket covering several square yards, and overhung, as it were, with a glorious rose-pink cloud, glowing in the sunlight. But this plant is something more than merely pleasing to the eye. It is a most provocative thing, holding the key to many problems, if we could only find it. It presents so many and such varied aspects that I scarce know where to start in my attempt to present it in proper light. Since this is the holiday season, let me begin with its "habitat"; for it will be encountered in all sorts of places. And this in itself is a peculiarly interesting fact.



SEED-PODS, MATURE FLOWERS, AND BUDS: THE INFLORESCENCE OF THE BAY-WILLOW.

The inflorescence, or flower-head, of the bay-willow may be as much as a foot long. The lower portion bears seed-pods; above are mature flowers; and above these come unopened buds in various stages of development.

our gardens, and will increase and multiply if their requirements are carefully studied. But leave them to themselves, and they die. The area of distribution may be extensive, though discontinuous, but the environment is, and must be, always similar. Let me take a few concrete cases to make my meaning clearer.

One of the commonest of our garden saxifrages is that known as the London Pride, or St. Patrick's Cabbage. It will flourish even under the adverse conditions of a London garden. Yet only in the West of Ireland—in the British Islands—is it to be found growing wild. You will not find it again in a wild state till you explore the Pyrenees and parts of Spain and Portugal! Though it be a digression, I cannot forbear to comment on this somewhat surprising distribution, which has some curious and instructive parallels. No fewer than seven plants in the British flora are unknown in Great Britain, but are native to the soil of Ireland. Elsewhere they are to be found only, or mainly, in the Pyrenees. Of these, three heaths are confined to Connemara and the Pyrenees; two saxifrages, the London Pride and the kidney-leaved geum, have their headquarters in Kerry and are again met with only in the Pyrenean region; the beautiful large-flowered butterwort, abundant in parts of Kerry and Cork, grows in south-west Europe and the Alps; while the beautiful strawberry-tree, which gives such a charm to the woods of Killarney, is found elsewhere only along the Mediterranean.

And what is true of these plants is true also of some of the animals of Ireland. Let me cite two examples. The spotted slug of Kerry is found elsewhere only in Portugal and north-west Spain. Finally, there is a dragon-fly (*Tiodes*), found only in Ireland, the South of France, Spain and Portugal. Many theories have been advanced to account for this curious distribution; and of these the most probable is that which postulates an ancient land-bridge, which, long ago, must have stretched across the northern Atlantic region, uniting not only the boreal districts of Europe, but also of North America. The evidence in favour of the American connection I must leave for another occasion.

And now let us return to our willow-herb. The London Pride loves a rock-crevice within reach of the spray of a waterfall; it thrives in a smoke-laden London garden; yet it has never extended its range beyond the West Coast of Ireland as a wild plant. The willow-herb is, strictly speaking, an Alpine plant. Visitors to the Lake District just now will have an opportunity of seeing it in its full glory. Yet it contrives to flourish under conditions very far from Alpine. One may see great patches of it on waste land in Surrey. No fewer than twelve species of willow-herb have a place on the British list. And these, all save one—the narrow-leaved species—are capable of inter-breeding and producing fertile hybrids. In the British list alone, no fewer than thirty-three hybrids find a place, the result of crossing between eleven of our twelve species.

The flower-head of the willow-herb takes the form known as a "raceme"; its appearance is well shown in one of our photographs. Here, it will be noticed, the lower part of the inflorescence is occupied by the ripening seed-pods. Above them are fully-opened flowers, and above these, again, are unopened flower-buds, in various stages of development. The nectaries, or "honey-pots," though readily found by the bees, are by no means easily found by the less-informed human, for they are carefully hidden by the over-arching dome formed by the stamens. A ring of long narrow sepals alternates between the larger petals, while the stamens are seen grouped round the central style, or pistil, which, in the mature flower, is surmounted by four curled stigmas.

But the really important thing about this inflorescence is the fact that it is what is called "protandrous." That is to say, the anthers ripen before the stigmas, and a certain number of the flowers

are self-fertilised. But this happens only in some of the willow-herbs, and only the earliest flowers to open are thus affected; the shedding of the pollen before the stigmas are ripe on that inflorescence ensuring the more profitable cross-fertilisation.

The pollen-grains are arranged in little groups of four, hanging together by means of sticky threads; but this, of course, can only be seen under the microscope.

A very simple instrument is now on the market, and those who love flowers would find it add immensely to the interest of the garden to take up the study of this precious dust; for it presents an infinite variety both in the matter of form, sculpture, and colour. As touching the seed-pods: these, when ripe, split, and liberate the seeds, each of which develops at its apex a little tuft of long silky hairs, serving as a sort of parachute to carry them away as far as possible from the parent plant.

Finally, on some of my plants, the inflorescences have, for some inexplicable reason, failed to develop properly; minute, unopened flower-buds being seen running up the flower-head from the axil of a large leaf-like "bract." As

these plants are growing intermingled with normally flowering plants, this anomaly is difficult to understand. I may be able to solve the mystery, but I very much doubt it.



THE BAY-WILLOW: WHEN THE STIGMAS ARE READY FOR FERTILISATION THEY SPLIT UP TO FORM A CROSS.

When the stigmas are ready for fertilisation they split up to form a cross. The anthers in this flower have shed their pollen. The flowers measure one inch across.

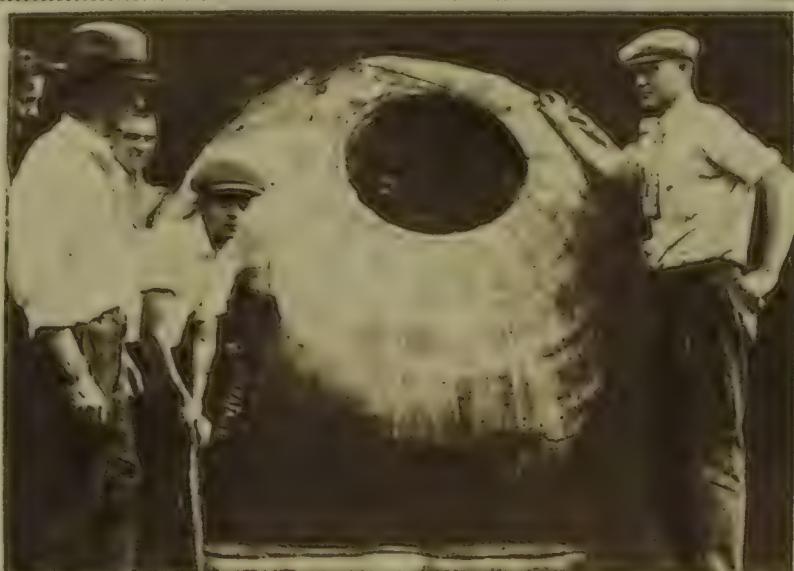


THE BAY-WILLOW: THE STIGMAS FORM A CLUB-SHAPED BODY AT THE END OF THE STYLE.

When the flowers are examined through a magnifying glass, the arrangement of the anthers and the state of the pistils are more easily seen. In this flower, the stigmas form a club-shaped body at the end of the style, or pistil. The sepals are seen as long narrow leaves alternating with the larger petals and coloured like them.

With a large number of plants, as with animals, there seems to be some mysterious, innate peculiarity, either of soil, climate, or food, rendering an extension of its area of occupation impossible, even when there are no physical barriers such as confront island-dwellers. They will bear transplanting to

SHOOTING NIAGARA IN A RUBBER BALL: A DARING EXPLOIT SUCCEEDS.



PREPARING FOR THE GREAT ADVENTURE: THE BALL WITH ITS OCCUPANT INSIDE (WAVING HIS HAND IN THE APERTURE) BEFORE BEING CLOSED.



WITH THE DARING ADVENTURER ENCLOSED INSIDE: THE GREAT RUBBER BALL BEING HERMETICALLY SEALED JUST BEFORE THE START.



THE MOST THRILLING MOMENT FOR THE THOUSANDS OF SPECTATORS WHO WATCHED M. LUSSIER'S SENSATIONAL FEAT: THE BIG RUBBER BALL, IN WHICH HE WAS ENCLOSED, ON THE BRINK OF THE HORSESHOE FALL AT NIAGARA (WHERE IT STRUCK A ROCK, CAUSING SOME ILL-EFFECTS) SEEN JUST AS IT DESCENDED THE GREAT CATARACT INTO THE RAGING WATERS BELOW.



APPROACHING THE BRINK OF THE CATARACT: THE RUBBER BALL CONTAINING M. LUSSIER AFLOAT ON THE SWIRLING WATERS ABOVE THE NIAGARA FALLS.



M. JEAN LUSSIER, DAZED AND SLIGHTLY BRUISED, HELPED ALONG AFTER HIS RELEASE FROM THE BALL: THE SUCCESSFUL END OF AN AMAZING EXPERIENCE.

The extraordinary feat of shooting the Niagara Falls in a rubber ball was successfully performed, on July 4, by M. Jean Albert Lussier, a French-Canadian machinist, aged thirty-four, of Springfield, Massachusetts. The ball, which he devised himself, had walls 3 ft. thick, with thirty-two oxygen compartments let into them, and an interior space 6 ft. in diameter. It was covered with a light framework of steel, and, with Lussier inside, weighed 758 lb. There was a weight at the bottom intended to keep him the right way up, but it shifted and he went over the falls head first. Just before the descent, the ball struck a rock, and some of the compartments burst, but he was saved from injury by pillows

and straps holding him in position. At the foot of the cataract the ball bounced five or six times, and a waterman named William Hill, an expert life-saver whom Lussier had engaged, reached it in a boat and towed it ashore. The occupant was semi-conscious but not seriously hurt, and he soon came round. "I knew the minute that I went over the top," he said, "and I felt the bump at the bottom. That was when I was cut and bruised." He undertook the exploit to emulate that of Bobby Leach, who some twenty years ago went over the Falls in a barrel; also to raise funds by a vaudeville tour, to buy a farm for his parents in Canada.

BOOKS OF THE DAY.

THE Little Corporal

still provides "good copy," in spite of subsequent competitors. Perhaps that is because the Great War produced no such dominating central figure; we have had our "Napoleonic era" highly intensified, but hardly a Napoleon. Another reason may be that it takes a century or so to collect all the evidence bearing on these complex international "murder cases." If a greater "Great War" occurs a hundred years hence, people may still be reading about ours, because the available facts will then have been unearthed, while those of their own struggle remain buried in official secrecy.

Seldom has the world waited so long for an important record as for "THE MEMOIRS OF QUEEN HORTENSE." Edited by (the late) Prince Napoleon. With a Foreword and Notes by Jean Hanoteau. Translated by Arthur K. Griggs and F. Mabel Robinson. Illustrated (Thornton Butterworth; 2 vols., £2 2s.). This is the English version of the autobiography of Hortense de Beauharnais, daughter of the Empress Josephine by her first husband, who had been guillotined during the régime of Robespierre. Hortense became the step-daughter of Napoleon when he married her mother, and in 1802 she became his sister-in-law by marrying his brother Louis, afterwards King of Holland. While parts of her story have supplied material for other writers, the work has, for some reason, never before been issued in its entirety.

After the Emperor's downfall, the ex-Queen began her memoirs at Constance during the winter of 1816-17, and finished them at Augsburg in 1820. In her concluding paragraph she writes: "Lonely though I am, exiled from my country, lamenting the dreary fate of the benefactor of my family, I often say to myself, 'My life is ended. I have no fear of passions: I have conquered them. Nor do I fear misfortune: I have endured it.'" She was then, however, only thirty-seven, having been born in 1783, and she still had seventeen years to live. Although, of course, her subsequent history may be found elsewhere, I think a short summary might have been included here. As it is, little is told of her latter days, beyond her testamentary disposition of her manuscripts. They form a narrative of extraordinary interest, not only as a revelation of the writer's own early life and love affairs, but as a unique sidelight, from a domestic angle, on the personality of Napoleon. He emerges as a very human person, though an autocrat in private as in public, and the general effect will be, I think, to render him more likable and more intelligible.

Hortense herself, as a young girl, in her attitude towards him began with a little aversion, and, though she was interested in General Bonaparte's ghost stories, she objected to him as a step-father. "I will give him credit for all his other conquests," she said once, "but I will never forgive him for having conquered Mother." Later, her feelings changed, but she was always a little afraid of him. Her own marriage, at seventeen, was one of duty and self-sacrifice, and proved unhappy. Discussing the project with Josephine, Bonaparte said: "We may never have children. I brought up Louis and look upon him as a son. Your daughter is what you cherish most on earth. Their children shall be ours. We will adopt them." So it came about that Hortense married Louis in an attempt to save Josephine from the divorce which had even then been suggested to enable the First Consul to have an heir. "It was a question," she writes, "of sacrificing my romantic fancies to my mother's happiness. I could not hesitate between the two."

Very soon after the marriage Louis revealed his unreasoning jealousy. One day, at Malmaison, his young wife and a girl friend were laughing at the efforts of a "rather gawky" young officer to solve a puzzle, while Louis sat by reading a novel. He thought their laughter was aimed at himself, and afterwards bitterly reproached Hortense, threatening to leave her if she thus humiliated him. "Words cannot describe my despair," she writes. "In an instant I saw all my dreams, not only of happiness but even of tranquillity, collapse about me. I could not have imagined such a disposition." This was the beginning of a union that ended in misery and separation. Later, it seems, Hortense bestowed her affections elsewhere, but in this affair she was equally unfortunate, for the lover eventually went off and married someone else.

After all, however, it is for the fresh light on Napoleon and his doings that the memoirs of Hortense will be chiefly read. There are many passages on which I should like to enlarge—descriptions of social life under the Republic and the First Empire; Napoleon's "anti-Feminist" views; his management of jealous Generals, reconciled "with a

gentle pull of the ear"; his regret for the execution of the Duc d'Enghien (for which Hortense blames Talleyrand); the divorce of Josephine and Napoleon's marriage with Marie Louise; his attempt to learn dancing under the tuition of Hortense; the amusing episode of his incognito visit with her to the St. Cloud Fair, where they saw themselves in waxworks and got separated in the crowd from the equerry entrusted with all their loose cash; Hortense's interview with Wellington and her appeal to him to make the French Government supply promised funds to the exiled Emperor in Elba; Napoleon's reported remarks on contemplating suicide at that time; and, finally, the pathetic picture of the vanquished Emperor after Waterloo.

In connection with this "last phase" it is interesting to recall the state of public opinion in England after the victory. There was a certain element of what in later days would have been called "pro-Napoleon" feeling, expressed

John, it will be remembered, he was imprisoned and fined for satirising the Prince Regent. Mr. Edmund Blunden, who has in hand a full biography of Leigh Hunt, deals here chiefly with literary matters rather than politics, but naturally there are allusions to the foreign scene.

In an account of the *Examiner* in the year of Waterloo he says: "Three weeks later . . . Hunt was able to write on 'Bonaparte's Surrender of Himself to an English Man of War'; this he did with words readily transferable to the prevalent mood when in 1918 the other Great War closed: 'We are like drinkers in the last stage of their habits, who have so long been accustomed to drams that excitement is succeeded by mere dullness.' He hoped that Bonaparte might be comfortably imprisoned in Great Britain. Discussing the despatch of the prisoner to St. Helena, Hunt admired Napoleon's bearing in face of this unwelcome order . . . condemning the action of the Ministers as embodying a 'petty fear and a still pettier revenge,' and finally declaring that the origin of militarists lay in the current system of education."

Mr. Brimley Johnson, whose book includes a hitherto unpublished letter from Shelley to Thomas Jefferson Hogg, with other new material from diaries and correspondence, gives among his extracts from the *Examiner* an article on Bonaparte's Tours, dated Oct. 20, 1811. Here we get a contemporary and not unsympathetic view of the Emperor, four years before his final overthrow, and his methods of consolidating his position and supervising the progress of the new France that he was building up. "Like a wise Prince (says Hunt's journal) he wishes to see into things for himself . . . he does not blaze about; he flashes like the lightning; takes the eye by surprise, acts with a single stroke, and leaves it astounded. . . . What makes Bonaparte comparatively great is the littleness of those with whom he contends . . . but, regarded with an eye to solid wisdom, he is only a great boy among little ones, one with a longer sword and a larger plum-cake than the others, and just wiser enough to be more acquainted with care."

Another glimpse of the Napoleonic period occurs in the last chapter of "THEIR MAJESTIES OF SCOTLAND." By E. Thornton Cook. Illustrated (Murray; 21s.), a picturesque history of the northern kingdom from the days of Macbeth to the Jacobite claimants, in the form of royal biographies. When "Charles III." died in 1788, his brother, Cardinal York, proclaimed himself "Henry IX., King of Great Britain, France, and Ireland, Defender of the Faith." After the French Revolution he spent all his private means in an endeavour to save the Papal States from Bonaparte's troops. "Driven to take flight when the French soldiery entered Rome," he found refuge in a Venetian monastery, and the story of his destitution reached England. "George III. (we read) sent money for 'immediate necessities,' and the promise of an annuity, with such a graceful letter that 'the last of the Stuarts' decided to accept." Meanwhile, his brother's widow, "Queen" Louise, "saw the Tuilleries stormed, and fled for refuge to Mons . . . then on to Florence, where she held court and established such a *salon* as to occasion anxiety to Napoleon. When, after Waterloo, an influx of English travellers swept the Continent, there were few who did not find their way to the 'court' of Louise."

She died in 1824, seventeen years after "Henry IX."

Of cognate interest is a volume called "SCOTTISH DIARIES AND MEMOIRS," 1550-1746. Arranged and Edited by J. G. Fyfe. With Introduction by Professor R. S. Rait. Illustrated. (Stirling: Eneas Mackay; 5s.). This book contains a large collection of extracts from diaries and reminiscences of various dates, giving vivid glimpses of contemporary Scottish life and politics, and each prefaced by a short account of the particular writer. I am not sure that such chronicles as those here represented lend themselves suitably to selections or anthology, and the volume involves, perhaps, too many abrupt transitions for continuous enjoyment, but as a companion commentary to a connected reading of Scottish history it will doubtless be much appreciated.

More consecutive in its treatment of a restricted range of subjects, on a smaller scale, is "A HIGHLAND CHAPBOOK." By Isabel Cameron (Stirling: Eneas Mackay; 3s. 6d.). These pleasantly written essays are concerned mainly with popular customs, superstitions, and folklore, described in a spirit of affectionate familiarity. The author is one of those who could truly declare: "My heart's in the Highlands; my heart is not here."

C. E. B.

To Our Readers and Photographers at Home and Abroad.

THE ILLUSTRATED LONDON NEWS" has always been famed for its treatment of the various branches of Science.

Its archaeological articles and illustrations are known throughout the world, and its pages dealing with Natural History and Ethnology are of equal value. These and other subjects are dealt with in our pages in a more extensive way than in any other illustrated weekly journal. We take this opportunity, therefore, of urging our readers to forward to us photographs of interest in these branches of Science.

Few people visiting the less-known parts of the world fail to equip themselves with cameras, and we wish to inform explorers and others who travel that we are glad to consider photographs which show curious customs of various nationalities, civilised and uncivilised, their sports, habits, and costumes; in fact, anything of a little-known or unusual character.

We are very pleased to receive, also, photographs dealing with Natural History in all its branches, especially those which are of a novel description. Our pages deal thoroughly with unfamiliar habits of birds, animals, fishes, and insects.

To Archaeologists we make a special appeal to send us the results of recent discoveries.

In addition, we are glad to consider photographs or rough sketches illustrating important events throughout the world; but such contributions should be forwarded by the quickest possible route, immediately after the events.

We welcome contributions and pay well for all material accepted for publication.

When illustrations are submitted, each subject should be accompanied by a suitable description.

Contributions should be addressed to: The Editor, *The Illustrated London News*, 15, Essex Street, Strand, London, W.C.2.

in the literary journalism of the day. Echoes of the controversy occur in two books of closely associated interest and overlapping contents. One is "LEIGH HUNT'S 'EXAMINER' EXAMINED," Comprising Some Account of that celebrated Newspaper's Contents 1808-25, and Selections by or concerning Leigh Hunt, Lamb, Keats, Shelley, and Byron, illustrating the literary history of that time, for the most part previously unprinted. By Edmund Blunden. With Portrait of Leigh Hunt as frontispiece (Cobden-Sanderson; 15s.). The other volume is "SHELLEY-LEIGH HUNT." How Friendship made History and extended the Bounds of Human Freedom and Thought: Being Reviews and Leaders from the *Examiner*, etc., with intimate Letters between the Shelleys and Leigh Hunt, partly from unpublished Manuscripts. Edited, with Introduction, by R. Brimley Johnson (Ingram and Grant; 12s. 6d.).

Both these books, which should obviously be read together, constitute a tribute to Leigh Hunt, partly as a sound literary critic to whom posterity owes a debt for his defence—almost one might say his "discovery"—of Keats and Shelley, at a time when their contemporaries delighted to dishonour them; partly as a liberal-minded thinker and reformer who fearlessly attacked the abuses of his time and pointed the way to our larger freedom. With his brother

"TRANSLATED": A LOCK OF THE HAIR OF LUCREZIA BORGIA.

REPRODUCTIONS BY ARRANGEMENT WITH "L'ILLUSTRAZIONE ITALIANA." THE PHOTOGRAPH OF THE PICTURE BY NESSI; AND THAT OF THE LOCK OF HAIR WITHOUT ITS SETTING BY DARIO GATTI.



LUCREZIA BORGIA, DUCHESS OF FERRARA, DAUGHTER OF POPE ALEXANDER VI., AND ONLY SISTER OF CESARE BORGIA—A PORTRAIT HITHERTO UNPUBLISHED; NOW IN PRIVATE KEEPING.

Lucrezia Borgia, Duchess of Ferrara, daughter of Pope Alexander VI., and only sister of Cesare Borgia, has been a victim of malignity as well as a woman much adored. Many there were who accused her of sharing the licentiousness of her age, but, even as Cesare is represented by Machiavelli as a model ruler, so Lucrezia, whose beauty was superb and whose patronage of literature was magnificent, has been cleared by the writers of later years of the grosser of the charges brought against her. Further, we have now the jealous guardianship—one might almost say, the worship—of that lock of her hair which is treasured in the Ambrosian Library at Milan. A writer in "L'Illustrazione Italiana" is, indeed, lyrical concerning it and its recent "translation." Kept hitherto in a most modest cardboard box, the tress has been transferred to an ornate setting, the work and the design of Alfredo Ravasco, who is hailed as a prince among goldsmiths. "A love relic? it is asked. Perhaps a love relic; certainly, romantic. Did not Byron meditate upon it and tremble as he held in lingering fingers this pathetic relic of 'a head that shone like a sinister comet in the Heavens of the Renaissance'; and did not Gabriele d'Annunzio likewise wish to see the hair and hold it in his hands? It seems but a poor thing, this fair glory which dried and faded forlornly on the shelves of the library as a flower dries between the pages of a book. A poor thing to the eye—naught save a

Continued in Box 2.



THE "TRANSLATION" OF THE LOCK OF HAIR OF LUCREZIA BORGIA WHICH IS TREASURED IN THE AMBROSIAN LIBRARY AT MILAN: THE FAMOUS TRESS OVER WHICH BYRON WAXED RHAPSODICAL IN THE SETTING NEWLY DESIGNED FOR IT.



AS IT WAS WHEN KEPT IN A MODEST CARDBOARD BOX: THE LOCK OF HAIR OF LUCREZIA BORGIA, WHICH HAS NOW BEEN GIVEN FITTING SETTING.

thick lock, some 15 centimetres long, bound with two silk ribbons, a lock whose light ashen colour has almost gone in the passing of the years. Yet think how once the tress gleamed in the light of the sun and reflected the flickering glow of torches and of tapers; how Cesare's cruel hands may have smoothed it; how Giovanni Sforza, Alfonso, Prince of Bisceglie, and Alfonso d'Este must have caressed it; how Pietro Bembo, Cardinal and man of letters, must have loved to look upon it! Hair of Lucrezia Borgia! Angelic hair! Winding through the chronicles of the sixteenth century, it twined amidst the verses of the poets, as a tendril

Continued below.

Continued.]

might cling about a cedar. Golden it may have been, or yellow as ripened corn—and it is all that man can see of this proud daughter of her day; a little dead thing that seems to live eternally. And near it are living words; letters of Lucrezia to Pietro, seven letters and two poems; in them the significant sentence: 'This from now onwards will be my name: f.f.' Then this very 'f.f.' as a third person: and in the verses it is written: 'I think that if I were now to die, and my desire were to end with my ills, there would end a love so great

that the whole world would be without love.' And there is Pietro's answer: 'I enclose for you the Agnus Dei which I have for some time worn at my breast. Sometimes at night you yourself will deign to wear it out of love for me, even if you cannot do so by day; so that the precious casket of your heart will at least be touched by something that has touched mine.' Does this Agnus Dei rest with all that was mortal of Lucrezia in Ferrara's church of Corpus Domini? There are many who pass by. None knows."

SECRETS OF 'OLD MASTERS' DETECTED BY RÖNTGEN RAYS: PHOTO PICTURES BELOW PICTURES, AND



1a. A FLOWER-SUBJECT (ABOUT 1800)—WITH THE SECTION TO BE PHOTOGRAPHED BY THE RÖNTGEN RAYS SHOWN WITHIN LINES.



2a. AN ENGLISH PORTRAIT OF A MAN REVEALED BY THE RÖNTGEN RAYS AS BEING UNDER THE PIGMENT OF THE FLOWER-SUBJECT 1a.

IT is a well-known fact in the history of art that artists often painted pictures over works by earlier artists. Some years ago experiments were made in the use of Röntgen-ray photography for examining pictures in order to reveal instances of originals that had been painted over. The initial results were not very satisfactory, as knowledge of the technique of the subject was, at that time, and the specimens under trial had not been chosen by experts. Fresh trials were made recently at the Röntgen Technical Experimental Institution in Vienna, and, after numerous negatives had been taken, the conditions necessary for the obtaining of clear, detailed X-ray photographs were discovered. My assistant, Mr. Julius Fargel, the well-known painter and picture-restorer, using the eyes of an expert, selected the examples he deemed particularly suitable, and these numbered 30 per cent. of those he set aside for the purpose; these were found, under the outer pigments, pictures often more valuable than those which had been painted over them.

(Continued in Box 3.)



4a. AN ITALIAN PICTURE OF A MYTHOLOGICAL SUBJECT—WITH THE SECTION SUBMITTED TO PHOTOGRAPHY BY THE RÖNTGEN RAYS SHOWN WITHIN LINES.

In recent months, much interest has been aroused by various paragraphs and articles describing the photographing of pictures, and notably the pictures of Old Masters, by means of the Röntgen rays. It was announced, for instance, that X-rays were being used at the Louvre, where Professor Cellier had been given the task of testing the chief works in the galleries; and about the same time came the news from Vienna that Dr. Peterill, the expert who wrote the article given above, had been hard at work examining pictures by X-rays and, by this means, had found a number of forgeries. Dr. Peterill explains his own methods. We may add that Dr. Cellier, interviewed by the "Mail" a little while ago, said that the process of establishing the identity of the pictures in the Louvre and of checking those offered for purchase was carried out at the Conservatoire des Arts et Métiers—the National Physical Laboratory. Four

3a. REVEALING "SPOTTING" BY A RESTORER: A RÖNTGEN RAY PHOTOGRAPH OF A PORTRAIT OF A MAN IN THE HOLBEIN MANNER.



3. There was fear that the colours would undergo a change as a result of the X-rays photographic process, but numerous trials have proved that this fear was needless. For example, specimens of colours in the different combinations used by artists during the period when they were exposed to intensive X-rays for seven hours, showed no change of colour followed. In the ordinary course, the exposure for a Röntgen-ray photograph is only from 40 to 100 seconds.

Pictures were painted over very frequently for reasons manifold. One of the chief of these was the scarcity of suitable material upon which subjects could be painted. A well-stretched canvas, or a carefully made and varnished board, was a precious thing so far as the artist was concerned. It happened, therefore, that many a picture whose value was unknown or unrecognized at the particular period was made to serve as the "canvas" for an inferior painting. It is known also that for the very same reason an artist would paint a picture over a picture of his own; hoping to create something worthier than his first work. In certain

(Continued in Box 4.)



5a. A DUTCH PORTrait OF A LADY REVEALED BY THE RÖNTGEN RAYS AS BEING UNDER THE PIGMENT OF THE MYTHOLOGICAL SCENE 4a.



1b. A PORTRAIT OF AN ENGLISH LADY IN THE MANNER OF MME. VIGÉE-LEBRUN—THE SECTION SUBMITTED TO RÖNTGEN-RAY PHOTOGRAPHY MARKED.

GRAPHS REVEALING RESTORATIONS.

In order to obtain a Röntgen photograph of a picture, it is important that the X-ray should increase in strength as the atomic weight of the elements (salt) increases. Most of the Old Masters were in metallic (white lead, cinnabar, minium, chrome-yellow, ochre, smalt), and these weaken the X-rays according to their atomic weight. On the other hand, the organic colours which were used more frequently after the middle of last century, and consist entirely of low order elements (carbon, hydrogen, oxygen, nitrogen), weaken the intensity of the X-rays only to a slight degree. Thanks to this fact, we are able to reveal in Röntgen photographs the original and the hidden, the visible layer of colour and the hidden layer, one above the other. In the case of painting-over that took place more recently, the fresh painting does not show at all in the Röntgen photograph; so that the painting hitherto invisible is seen quite clearly and distinctly. Further, it is of importance that the old colours are recorded in the Röntgen photographs in accordance with their degrees of brightness. This is easy to understand, for bright colours are used with a touch of white lead and black ones with carbon (very black), or other early penetrable substances. X-rayed layers being comparatively thin, the differences in thickness being very slight, it is only by the use of long-waved (so-called "soft") X-rays that it is possible to obtain useful and contrasted photographs.

(Continued in Box 5.)

instances, the Röntgen photographs show such similarity of brush-marks that it is evident that the paintings-over, or improvements, are by the same hand as the original work. In addition, pictures which came into the possession of poor foundations or fell into the hands of peculiar godly collectors or were considerably damaged, otherwise insulted to their surroundings were almost always ruined. A poor, scruffy monk must often have changed a beautiful Virgin into a Madonna! Even Michael Angelo was compelled to clothe the nude figures in his "Last Day of Judgment."

It may be asked: "How do you select from a large number of pictures those likely to hide interesting secrets?" The answer is that, in the first place, two points are to be considered. If the age of the canvas or of the wood does not agree with the age of the painting and the colours used, one may be almost certain that there is another picture below the one that is visible; and it is possible also, on occasion, to trace on the surface of a painting raised outlines that have no

(Continued in Box 5.)

The upper, visible layer of pigment, which contained organic colour substances, does not show in the Röntgen photograph as was given earlier in the article. Illustration 1b presents a typical example of forgery. It shows the portrait of an English lady done in the manner of Mme. Vigée-Lebrun. The Röntgen photograph (2b) reveals a more recent baroque portrait which was underneath it. It is proved that the considerable value of the "Vigée-Lebrun" 1. No. 3b, a landscape by an imitator of Teniers, had below it the important still-life subject of an earlier epoch, painted in the manner of De Heem, which is illustrated in 4b. In this particular Röntgen-ray photograph we see parts of the landscape and parts of the still-life, one above the other, according to their metallic colours, and it is possible

(Continued in Box 7.)



5b. BY A MUNICH PAINTER (ABOUT 1770)—THE SECTION SUBMITTED TO RÖNTGEN-RAY PHOTOGRAPHY MARKED.

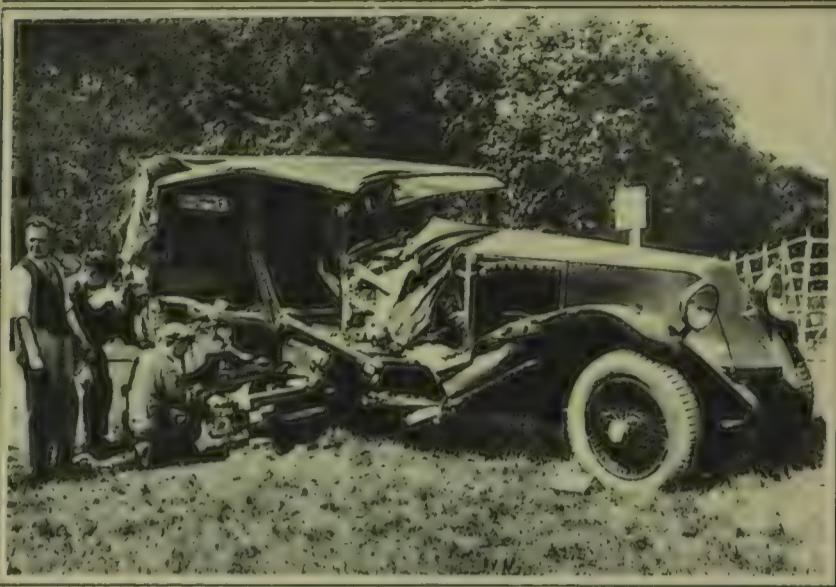


6b. A MADONNA AND CHILD IN THE RAPHAEL MANNER REVEALED UNDER THE PIGMENT OF THE MUNICH WORK 5b.

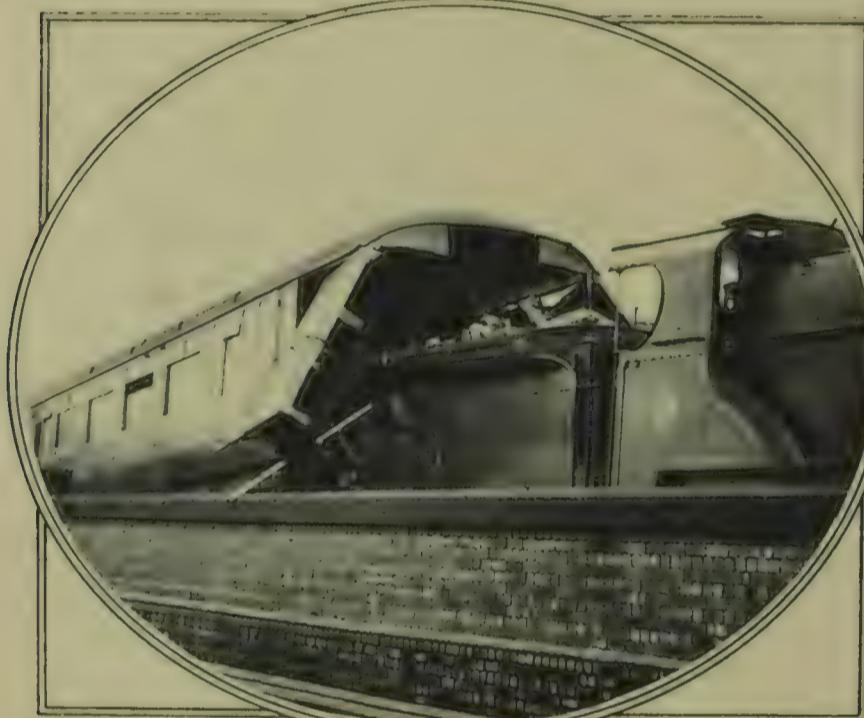
able to distinguish certain elements of the pictures notably the chimneyed house. It should be added that Röntgen-ray photography is not only valuable as providing means for the discovery of hidden masterpieces and forgeries, but also yields information as to the condition of pictures; and the genuineness of a picture is not the only thing considered when its value is being fixed: the state of preservation must be known as well. This point is illustrated in 3a. A Röntgen-ray photograph was taken of a picture of a man in the manner of Holbein, which seemed to be undamaged. The Röntgen photograph, however, revealed defects that had been covered by a restorer. Obviously, a picture so treated is of less moment than one faithfully preserved.—EDWARD PETERILL.

counter-checks are used, and in these the radio-active properties of the metallic components of the paints used by the Old Masters, as well as by moderns, play a leading part. To which it is good to add the expert statement: "Here are the Mona Lisa's identity papers. You need have no fear about Leonardo da Vinci's masterpiece." As Dr. Peterill suggests, this use of the X-rays, with which he has been particularly successful, should make picture-faking a profession of the past: the age of an Old Master, at all events, can now be given with certainty; and, thanks to recognition of characteristic brush-marks, the Old Master who painted a particular picture can be determined with little, if any, fear of contradiction. In the same way, a picture that is apparently without blemish may be revealed as having been re-touched.

"CURIOUS CHANCES" IN ACCIDENTS: DISASTERS FATAL AND OTHERWISE.



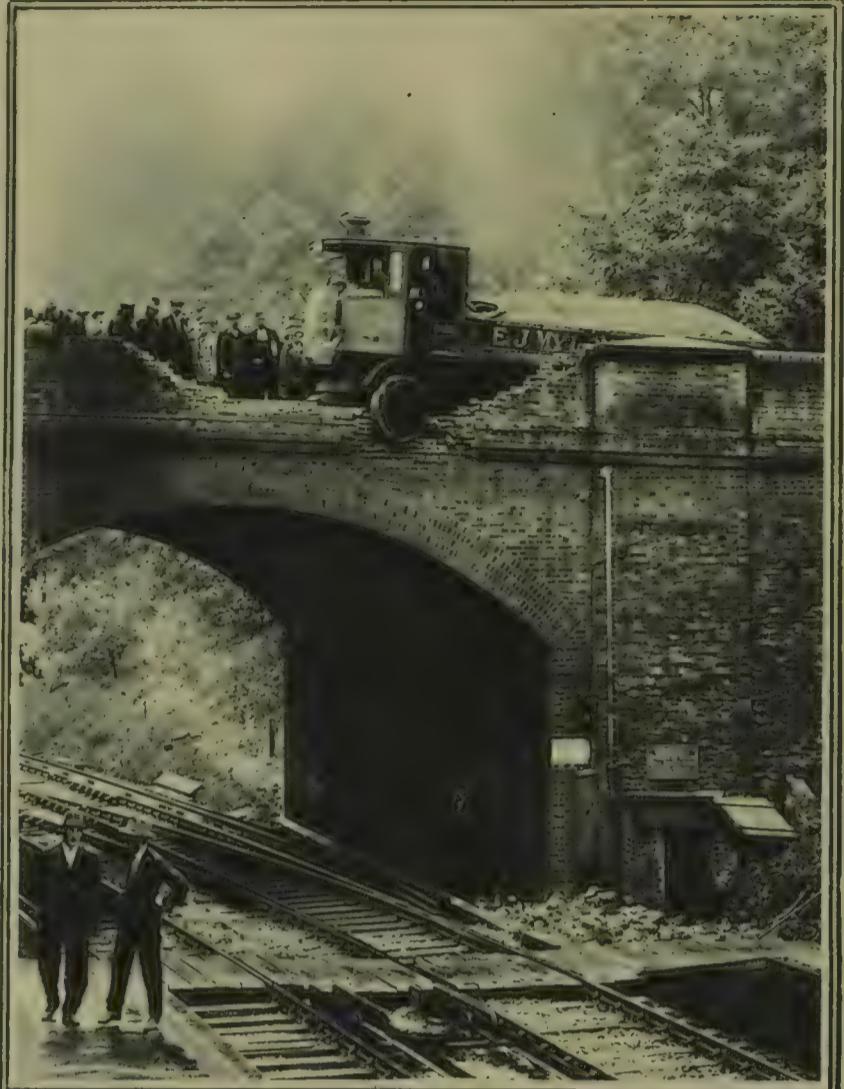
AFTER THE COLLISION IN WHICH THE HON. GILBERT GREENALL (WHO DROVE) WAS KILLED AND THE CHAUFFEUR BESIDE HIM ESCAPED: HIS WRECKED CAR.
The Hon. Gilbert Greenall, elder son of Lord Daresbury, was killed in a motor-car accident on July 27. He was driving a 45-h.p. saloon from Ascot to Windsor, and just after entering a gate into Windsor Great Park, collided with a motor furniture van. The off side of his car was torn off, and he was pinned in the wreckage. His chauffeur beside him escaped almost unharmed.



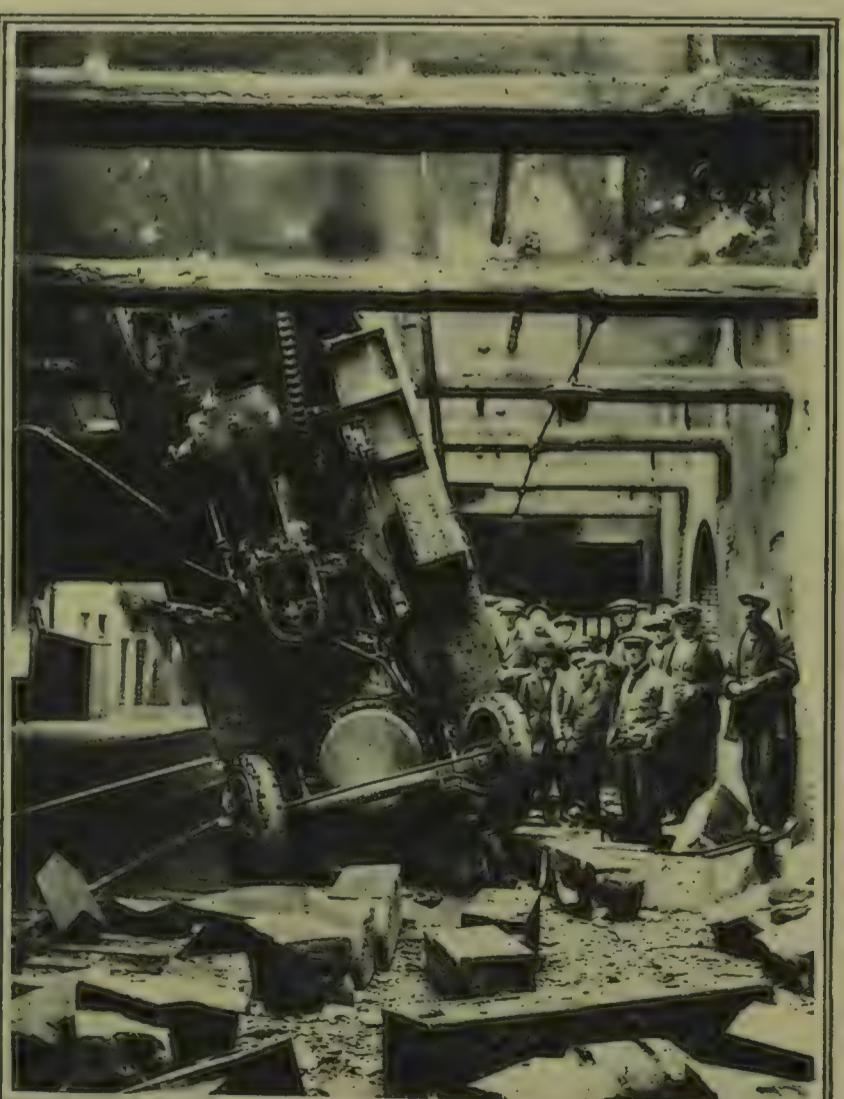
THE REAR COACH OF A STATIONARY EXCURSION TRAIN "TELESCOPED" BY A LIGHT ENGINE: THE MANCHESTER COLLISION.
An excursion train, containing 250 holiday-makers bound for Blackpool, was standing stationary on the line near Victoria Station, Manchester, on July 29, when it was run into by a light engine. The tender telescoped the rear coach, and the guard was killed in his van, while the next two coaches were badly damaged. Over thirty passengers suffered from minor injuries or shock.



WHERE A TRAIN NARROWLY ESCAPED DISASTER: A SUBSIDENCE ON THE LINE NEAR LIVERPOOL STREET DUE TO THE COLLAPSE OF AN OLD SEWER THROUGH RAIN.
At 4 a.m. on July 28 a train of empty carriages and its crew narrowly escaped disaster on the L. and N.E.R. line near Coborn Road Station, between Liverpool Street and Stratford. The driver, feeling something wrong, pulled up, and found that the ground had fallen in, leaving rails unsupported over a subsidence, due to the collapse of an old sewer owing to heavy rain on the previous night.



A STEAM-WAGON ALMOST FALLS OVER A BRIDGE ON TO THE RAILWAY BELOW: A STRANGE ACCIDENT AT GUILDFORD.
At Guildford a few days ago a steam-wagon, belonging to Messrs. E. J. Mylon, of Hayes, Middlesex, skidded into the wall of a bridge over the Southern Railway line. The vehicle knocked down the wall, and came to rest with one of the front wheels hanging over the edge. The driver jumped out and fell over the bridge on to the line 25 ft. below.



A REMARKABLE ACCIDENT AT GLASGOW: A STEAM-LORRY FALLEN FROM THE ROAD ABOVE DOWN AN AIR SHAFT ON TO A STATION PLATFORM.
On July 27, at Glasgow, a heavy steam-lorry proceeding along the Dalmarnock Road suddenly swerved and, mounting the pavement, crashed through a stone wall and toppled, nose first, down an air-shaft on to the platform of the Dalmarnock Station on the L.M.S. line. The driver and fireman were severely injured and were taken to the Royal Infirmary. Happily, no train was due at the time, and there were no passengers on the platform.

GOODWOOD, 1928: THE GREAT "COUNTRY HOUSE" MEETING.



1.



2.



3.

1. THE FINISH OF THE STEWARDS' CUP: LORD GLANELY'S NAVIGATOR WINS; WITH ENDOWMENT SECOND; AND STRANATHRO THIRD.

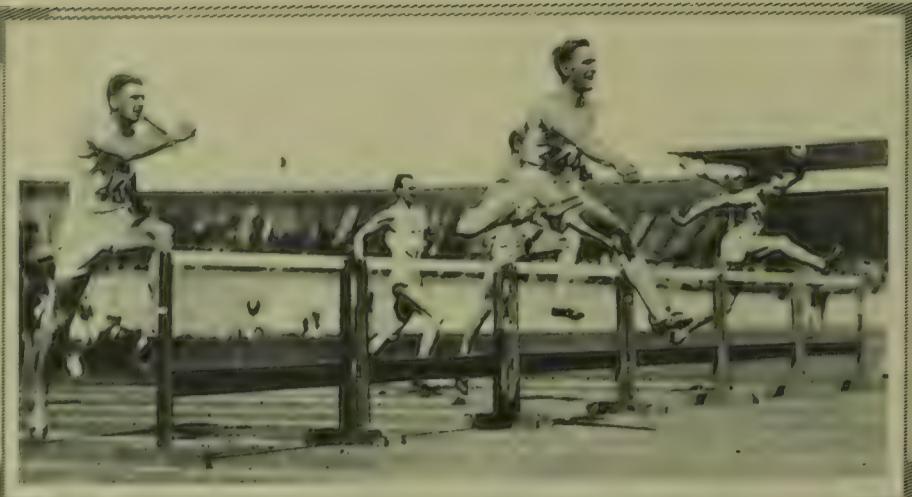
2. THE POPULAR SIDE OF THE MEETING: WATCHING THE RACING FROM THE TRUNDEL.

3. THE ROYAL SIDE OF THE MEETING: HIS MAJESTY THE KING AT GOODWOOD.

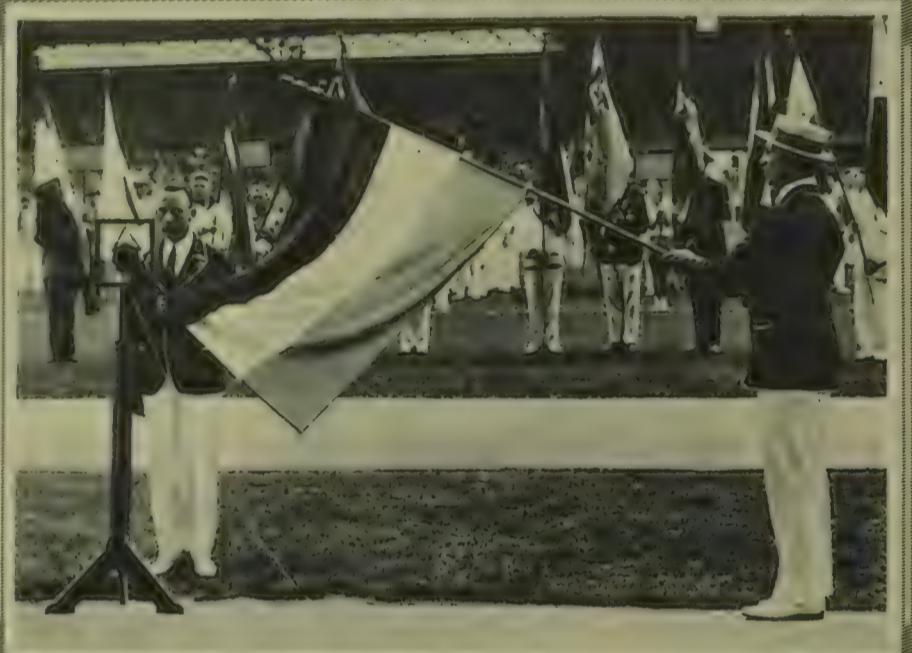
Goodwood, the famous "country house" meeting that marks the end of the season and precedes the migration to Cowes, was again attended by the King; but, as we note elsewhere, his Majesty was not at Goodwood House for the Week, as has been his custom. Owing to the death of the seventh Duke of Richmond and Gordon, in January, there was no house-party there this year, and his Majesty was the guest of Admiral of the Fleet the Hon. Sir Hedworth Meux and the Hon. Lady Meux, at Pitshill, Tillington, Petworth, the eighteenth-century residence

of Col. W. Kenyon Mitford, which they had taken for the time. So great was the traffic on the first day that the King was held up by a two-mile line of cars and motor-coaches, and arrived only just in time to see the second race. The Stewards' Cup was won easily by Lord Glanely's Navigator; with Lord Lonsdale's Endowment second; and Mr. A. B. Walker's Stranathro third. The much-discussed Priory Park, last year's winner, was nowhere, and doubtless found his weight too much.

THE OLYMPIC GAMES: OPENING SCENES AND EVENTS AT AMSTERDAM.



A BRITISH VICTORY: LORD BURGHLEY (LEADING, IN CENTRE) WINNING THE 400-METRE HURDLE RACE IN A TIME (53 2-5 SECONDS) EQUAL TO THE OLYMPIC RECORD.



"WE SWEAR THAT WE COME TO THE OLYMPIC GAMES AS LOYAL COMPETITORS": ONE OF THE INTERNATIONAL ATHLETES (LEFT) TAKING THE OATH SWORN BY ALL THE TEAMS AT THE OPENING CEREMONY.



PRINCE HENRY OF THE NETHERLANDS, QUEEN WILHELMINA'S CONSOFT (SEATED ON THE FURTHER SIDE IN THE CARRIAGE), ARRIVING TO OPEN THE OLYMPIC GAMES AT AMSTERDAM.



AN AIR VIEW OF THE OPENING CEREMONY AT THE OLYMPIC GAMES: THE GREAT STADIUM AT AMSTERDAM WITH THE ATHLETES OF FORTY-SEVEN NATIONS PARADING IN THE ARENA.



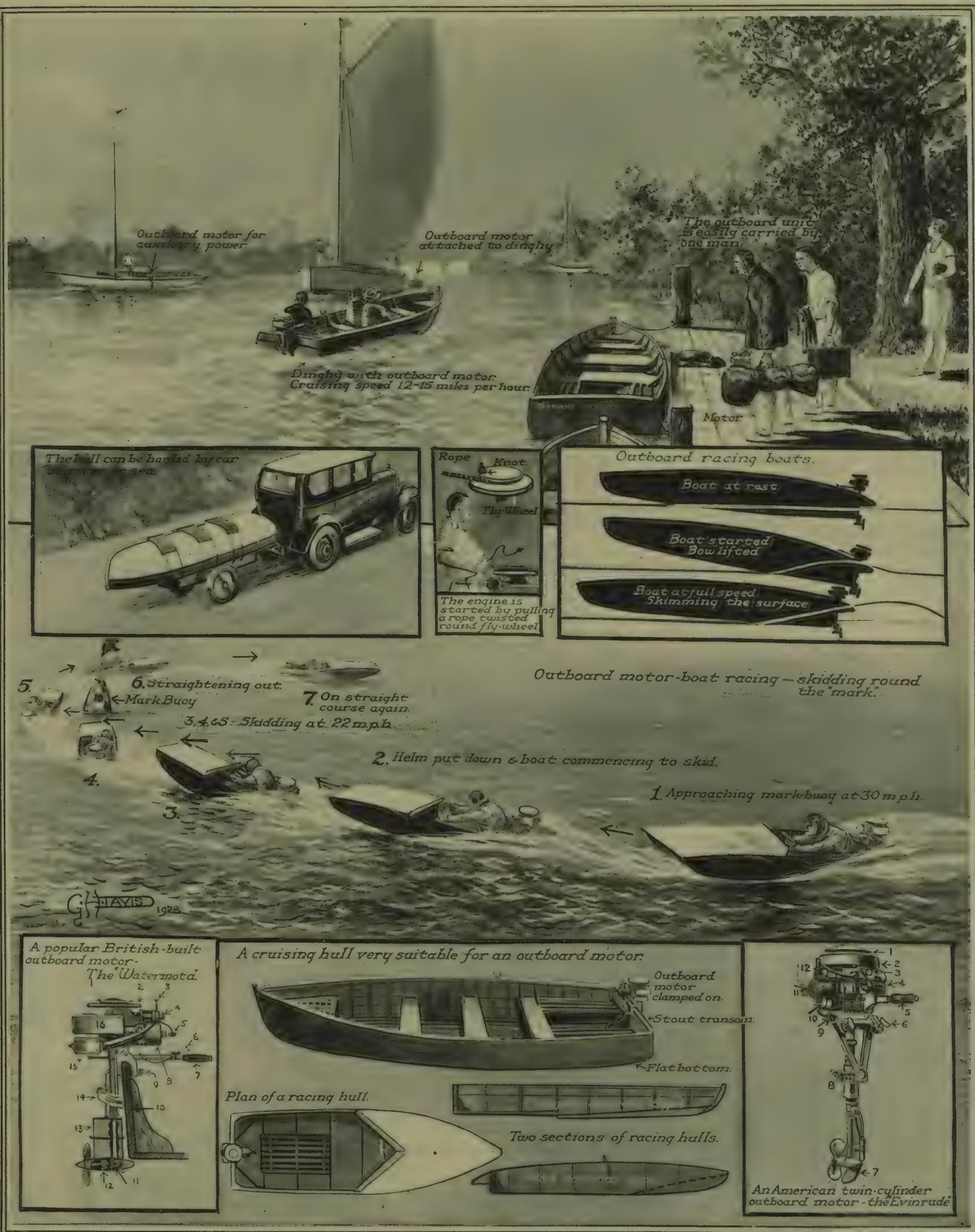
THE WINNER OF THE 10,000-METRES RACE DOGGING THE HEELS OF A RIVAL BEFORE HIS FINAL SPURT: PAAVO NURMI (RIGHT) AND V. RITOLA (WHO FINISHED SECOND)—BOTH OF FINLAND.

The Olympic Games of 1928, officially reckoned as the Ninth Olympiad, but actually the eighth (as the meeting arranged for 1916 was cancelled owing to the war), were formally opened in the Stadium at Amsterdam, on July 28, by Prince Henry of the Netherlands. Representatives of forty-seven nations are competing, and the march of the international teams, headed by the Greeks, round the Stadium, was a highly impressive spectacle. The teams took an oath in which they declared: "We swear that we come to the Olympic Games as loyal competitors, respectful of the regulations which govern them, and desirous of taking part in them in a chivalrous spirit for the honour of our countries and the glory of sport." The King and the Prince of Wales sent messages to the British

representatives, and the former said: "His Majesty is confident that they will, as ever, display, whether in victory or defeat; that spirit of sportsmanship which is the tradition of their race." The second day was a "red letter" one for athletes of the British Empire. Lord Burghley won the 400-metres hurdles in a time (53 2-5 seconds) equal to the Olympic record; while the 100 metres was won by P. Williams (Canada), with J. E. London (Great Britain), second; and the throwing the hammer was won by P. O'Callaghan (Ireland). A notable event of the first day was the 10,000-metres race—a great struggle between the two Finns, Paavo Nurmi and V. Ritola. Ritola led for lap after lap, with Nurmi close at his heels, but 150 yards from the end Nurmi went ahead and finished ten yards in front.

OUTBOARD MOTOR-BOATING FOR ALL: A POPULAR NEW PASTIME.

DRAWN BY OUR SPECIAL ARTIST, G. H. DAVIS. (COPYRIGHTED.)



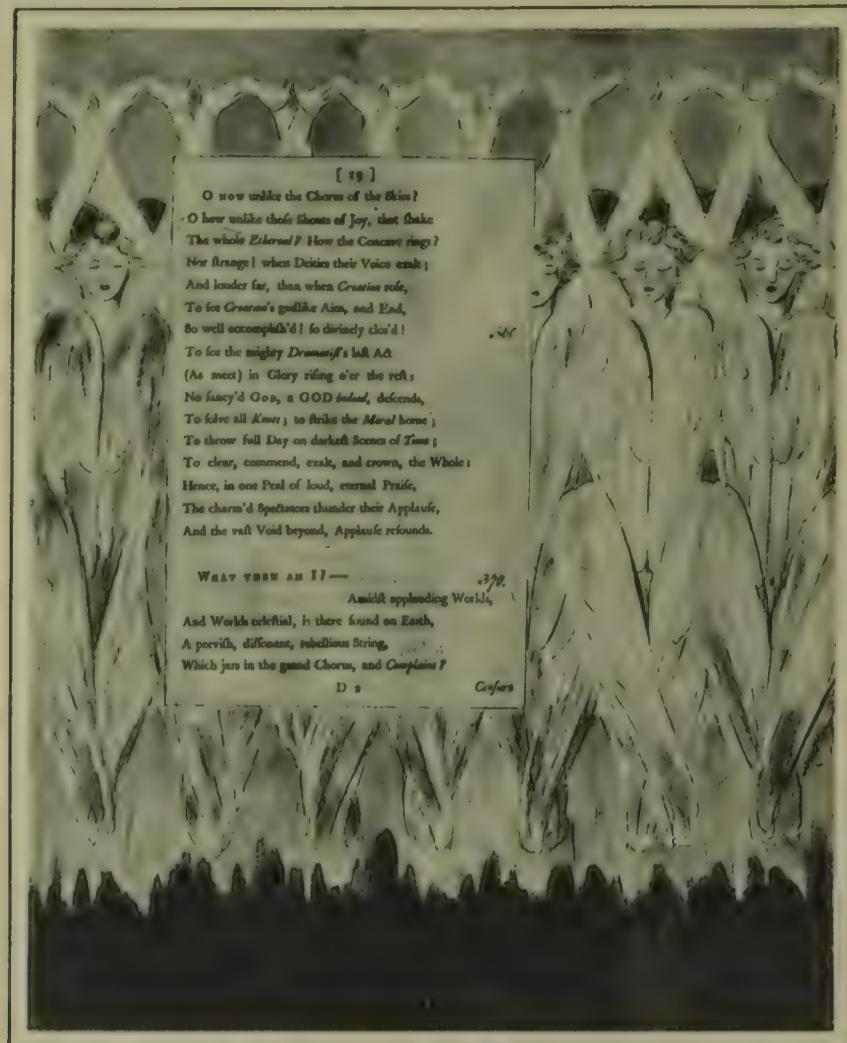
LOWER CORNER DRAWINGS: (Left.) 1. Pulley. 2. Flywheel. 3. Switch. 4. Magneto. 5. Sparking Plug. 6. Controls. 7. Tiller. 8. Cylinder. 9. Clamp. 10. Stout Transom of Boat. 11. Bevel Drive. 12. Water Pump. 13. Skeg. 14. Tilting Gear. 15. Steering Quadrant (for Wheel Control). 16. Petrol-Oil Tank. (Right.) 1. Starting Pulley. 2. Fly-wheel Magneto. 3. Lamp. 4. Cylinder. 5. Tiller Grip. 6. Clamp. 7. Skeg. 8. Tilting Gear. 9. Joint of Tilting Gear. 10. Exhaust Manifold. 11. Cylinder. 12. Petrol-Oil Tank.

MOTOR-BOATING MADE POSSIBLE FOR PEOPLE OF MODERATE MEANS: USES OF AN ECONOMICAL OUTBOARD UNIT.

Recently there has been a tremendous increase in the use of outboard motors, both for utility as well as racing purposes, and the cheapness of these little power-units brings a motor-boat within the scope of the man of moderate means. The complete unit costs from £40 to £50, and 1½ hours' cruising can be done for one gallon of petrol, and half a pint of oil—no more than that of a motor-cycle. Earlier motors of this type constantly broke down, but to-day engines have so improved that there is now little chance of that. Starting is easy. Round a grooved pulley on the fly-wheel is twined a cord with a knot that engage in a slot. This is given a smart pull, and the engine is spun like a top and started. The engines are of the single- and the twin-cylinder types, on the two-stroke method. Many river boats let on hire are not suitable for an outboard motor, and the Thames Conservancy

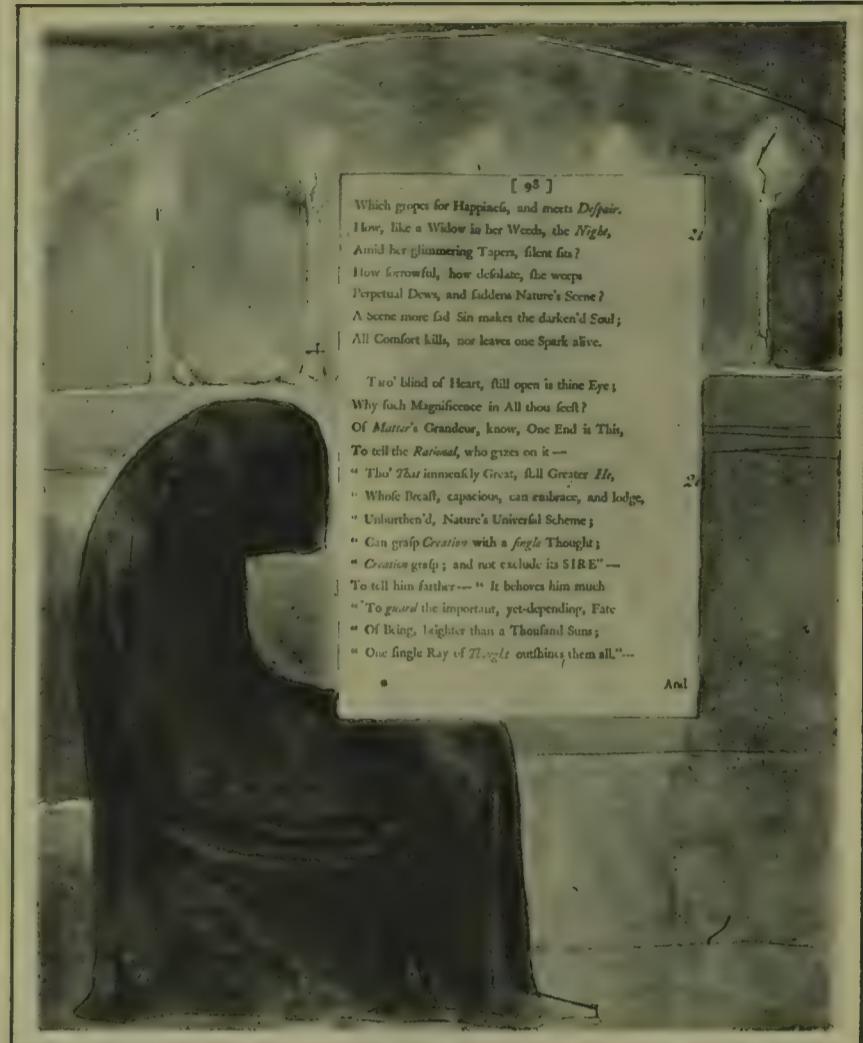
are against issuing licences for motors that can be transferred at will. However, special cruising hulls of the planing dinghy type, for which the outboard unit is suitable, 13 ft. long and weighing 160 lb., can now be purchased for £43 to £48. This boat can be easily drawn on a trailer behind a motor-car, and stored in the roof of a garage. Outboard marine motor racing is exceedingly popular in America, and is becoming equally popular in Great Britain. Valuable prizes are offered, and races take place almost weekly, notably at the Welsh Harp at Hendon. Speeds of over 30 miles per hour are attained. Considerable skill is often shown in skidding the craft round the mark buoys. The hydroplane hull of a modern outboard racing boat when at full speed only draws about half an inch of water. These hulls cost from £25 to £35 each.

THE CAMERA AS RECORDER: NEWS BY PHOTOGRAPHY.



A MUNIFICENT AMERICAN GIFT TO THE BRITISH MUSEUM: ONE OF THE 500 BLAKE DRAWINGS PRESENTED BY MRS. EMERSON—"THE SONS OF GOD SHOUTING FOR JOY."

Commenting on the tendency of English works of art to cross the Atlantic to America, Mr. Geoffrey Keynes writes (in the "Times") : "Pessimists may take heart with the announcement that a generous American donor, Mrs. Frances White Emerson, of Boston, has recently decided that the Print Room at the British Museum is the proper destination for one of the finest achievements



"HOW LIKE A WIDOW IN HER WEEDS, THE NIGHT, AMID HER GLIMMERING TAPERS, SILENT SITS": ANOTHER BLAKE DRAWING FOR YOUNG'S "NIGHT THOUGHTS."

of an essentially English artist, William Blake. The gift comprises Blake's entire series of more than 500 water-colour drawings for Young's 'Night Thoughts,' and forms the noblest benefaction that has ever come from America to this department of the Museum." The drawings are worth something like £50,000.—[Photographs by Courtesy of the Metropolitan Museum of Art, New York.]



A QUANT OLD CUSTOM IN JAPAN AT THE OPENING OF ANY NEW BRIDGE: AN AGED COUPLE FROM THE LOCALITY LEADING THE PROCESSION.

A note on this picturesque photograph says: "An aged couple, in ceremonial garb, are seen leading the party on an occasion when a new bridge was first opened to the public. The custom is very old, and, whether the bridge is of concrete or steel-span, the opening ceremony is always attended by an old couple living in the vicinity. The custom may probably mean the expression of a wish that the bridge may last as long as the old people. This particular bridge, it should be noted, was made of wood."



RE-COLOURED AND RECENTLY UNVEILED: THE STATUE OF QUEEN ELIZABETH (BELIEVED TO BE THE ONLY CONTEMPORARY ONE) AT ST. DUNSTAN'S IN THE WEST. This old statue of Queen Elizabeth, believed to be the only one surviving from her own time, stands in a niche over the vestry door of St. Dunstan-in-the-West, in Fleet Street. It was recently discovered that the figure was originally coloured, and it has now been repainted and repaired. On completion of the work it was unveiled on July 31 by Dame Millicent Fawcett, who contributed to the cost of its restoration, along with her sister, Miss Agnes Garrett, Miss Gwen John, and Miss Jones, of Lincoln's Inn.

Historical Miniatures of Price; and a Pompadour Snuff Box.



QUEEN ELIZABETH; BY NICHOLAS HILLIARD.
(820 GUINEAS.)



MARY, QUEEN OF SCOTS; BY NICHOLAS HILLIARD.
(1000 GUINEAS.)



LADY ARABELLA STUART, DAUGHTER OF CHARLES, EARL OF LENNOX;
BY PETER OLIVER. (950 GUINEAS.)



HENRY, PRINCE OF WALES, ELDER SON OF KING JAMES I.; BY ISAAC OLIVER.
(260 GUINEAS.)



A LOUIS XV. OVAL GOLD SNUFF-BOX: THE ENAMELLED LID, WITH A BOUCHER SUBJECT OF VULCAN, VENUS, NYMPHS, AND DOVES ON CLOUDS. (3200 GUINEAS.)

It will be recalled that we reproduced four of the miniatures here given in colours in our issue of June 9 last, in monochrome. Concerning those re-illustrated, we print the following notes, in addition to recording the prices fetched at Christie's at the recent sale in which they figured. The Queen Elizabeth was described in Van der Dort's catalogue of "Pictures and Works of Art," belonging to King Charles I., at Whitehall Palace, as follows: "No. 31, done upon the wrong light, being Queen Elizabeth, upon an oval card, in a laced ruff, in a black dressing and habit, very richly adorned with gold and pearls, and a picture box hanging at her right breast. Done by the old Hilliard, bought by the King of the young Hilliard." (Note: All Van der Dort's rights and lefts are reversed.) Mary Queen of Scots wears a jet necklace with her monogram in the centre, and another designed as the Crown of Thorns with an enamelled gold crucifix attached. Lady Arabella



THE LOUIS XV. SNUFF-BOX: THE INTERIOR OF THE LID, WITH A PORTAIT OF MADAME DE POMPADOUR SUPPORTED BY CUPIDS. (PARIS HALL-MARK FOR 1758.)

Stuart was the daughter of Charles, Earl of Lennox, and Elizabeth, daughter of Sir William Cavendish. She was married secretly to William Seymour, afterwards Marquis of Hertford, for which she was imprisoned at Lambeth and in the Tower, where she died on September 27, 1615. She was buried in Westminster Abbey. Henry, Prince of Wales, was the elder son of James I., and brother of Charles I., and, but for his early death, would, of course, have been King of England. The Louis XV. snuff-box, which was sold by Messrs. Christie, Manson and Woods on the same day as the miniatures, is not only of very great interest in itself, but its portrait of Madame de Pompadour may be compared with that by Maurice Quentin de la Tour given in coloured photogravure in "The Illustrated London News" of July 28. The box was presented to Madame de Pompadour by Louis XV., and was purchased by the owner at the beginning of the Russian Revolution.



THE KING COMES TO COWES FOR "THE WEEK": HIS MAJESTY'S YACHT NEARING THE "V. & A." BUOY.

Describing his picture, the artist writes: "Over the assembled fleet of yachts and craft of all descriptions there is a sense of expectancy, for, by good fortune, it is to be a Royal Cowes, and word has gone round that the King is due to arrive. Night approaches. The silent arrival of the Harbour-Master's gig, and the appearance of a naval mooring-party taking station at the ponderous buoy marked V. and A., are signs that the Royal Yacht is near at hand. Almost simultaneously, out of the darkening scene, there looms up the great 'Victoria and Albert,' surrounded by ghost-like shapes of palatial steam-yachts which have formed up in a loyal procession from Portsmouth to take part in 'The Week.' Considerable ceremony and etiquette is observable, of a nature peculiar to the regulations governing a night arrival. Only those flags are still flying that this etiquette demands; the custom which dictates that colours shall be lowered at sundown being strictly observed by the yachting fleet. Finally, when the seeming confusion of signalling, the lowering and hoisting of special bunting, and the noise of dropping

anchors and rattling mooring-chains have died away, the 'Victoria and Albert' rides majestically to her buoy, the only vessel flying those symbols which denote that his Majesty has arrived." The date of 'Cowes yachting week this year is August 6-11. The guard-ship will be H.M.S. "Rodney," one of the two most powerful battle-ships in the world; the other being her sister, the "Nelson," which was inspected by the King when he made a strictly naval visit to Portsmouth on July 17. In connection with this, by the way, there is a social point. The battle-ship dance, if it is given, will be held on the fore-deck of the guard-ship and not on the quarter-deck, as, owing to "Rodney's" particular construction, her quarter-deck is very small, whereas her fore-deck runs practically half the length of the vessel. Further, there is a new King's Cup this year, a massive gold trophy presented by his Majesty for a handicap for yachts of 15 tons register belonging to the Royal Yacht Squadron. The inscription is "King's Cup, Royal Yacht Squadron Regatta, 1928. Presented by King George V."

FROM THE PICTURE BY FRANK

MASON, R.B.A. (COPYRIGHTED.)

"Like many an old friend. Craven Mixture is appreciated not for appearance, but for proved qualities.

I've smoked it for many a year and can assure you that it's the smoothest and most satisfying tobacco a man could wish for—still blended and matured by the true old-fashioned painstaking methods as it was in 1860.

It's not the label on the tin—it's the quality of the contents that counts."

*In Ordinary and Broad Cut.
Also in Cartridge Form.*

"The
plain old tin
and I work
together"



Craven

Mixture Tobacco

IN THE PLAIN OLD TIN

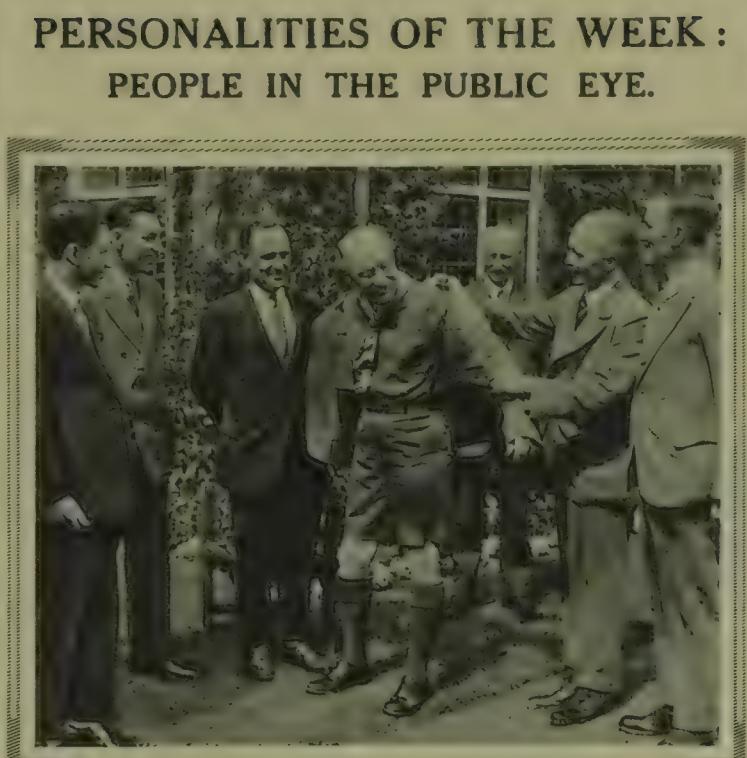
Sir James Barrie in "My Lady Nicotine"
says "IT IS A TOBACCO TO LIVE FOR"

2 oz. 2/5, 4 oz. 4/10 in Airtight Tins. CARRERAS LTD. Est. 1788

PERSONALITIES OF THE WEEK:
PEOPLE IN THE PUBLIC EYE.

MISS MARGARET MERCER-NAIRNE :
A PRESENTATION MINIATURE FOR LADY
VIOLET ASTOR.

This miniature, by Miss May B. Lee, was painted to the order of the "Times" staff, for presentation to Lady Violet Astor as a mark of their esteem. Miss Mercer-Nairne is the débutante daughter of Lady Violet, whose husband, Major the Hon. J. J. Astor, is the Chairman of the "Times" Publishing Company.



CELEBRATING THE TWENTY-FIRST ANNIVERSARY OF THE FOUNDATION
OF THE BOY SCOUT MOVEMENT : THE PRESENTATION OF A HEAT-PROOF
COAT TO LIEUT.-GEN. SIR ROBERT BADEN-POWELL.

The twenty-first anniversary of the birth of the Boy Scout movement, at Brownsea Island, Poole Harbour, in July 1907, was celebrated at Paxhill, Bentley, on July 28, when as many "originals" as possible lunched with the Chief Scout and Lady Baden-Powell. Sir Robert was presented with a heat-proof coat.



THE KING'S GOODWOOD WEEK HOSTESS,
AT PITSHILL, TILLINGTON : THE HON.
LADY MEUX.

Admiral of the Fleet the Hon. Sir Hedworth Meux, K.C.B., K.C.V.O., and the Hon. Lady Meux entertained the King for Goodwood, at Pitshill, Tillington, Petworth, which they took for the race week. Lady Meux was formerly Viscountess Chelsea, and she has five daughters by her first marriage.



MAJOR C. HALDANE
MACFALL.

(Born, 1860; died on July 25.) Art critic and artist. Exhibited at the Royal Academy and elsewhere. Son of Mme. Sarah Grand, the well-known novelist.



THE HON. GILBERT GREENALL.
Killed in a motoring accident on July 27.
Elder son of Lord Daresbury. A Lieutenant in the Life Guards. Aged twenty-seven.



PROFESSOR SAMOIL-
OVICH.

Head of the Russian Relief Expedition which, with the aid of the Soviet ice-breaker "Krassin," rescued survivors of the ill-fated "Italia" Arctic Expedition.



SIR ARTHUR CHANCE.
(Born, 1859; died, July 26.) Distinguished
Irish surgeon. A former
President of the Royal
Academy of Medicine
in Ireland. Held many
posts.



LORD BALFOUR'S EIGHTIETH BIRTHDAY : THE FAMOUS STATESMAN WITH THE MOTOR-CAR
PRESENTED TO HIM BY MEMBERS OF ALL POLITICAL PARTIES IN THE HOUSES OF
PARLIAMENT.

The presentation was made by Mr. Baldwin, in the Speaker's Courtyard. In his telegram of congratulation to the famous statesman, the King said: "It is a great pleasure for the Queen and me to send our heartiest greetings on his eightieth birthday to an old friend like yourself, and one who has been a faithful and valued adviser to three successive Sovereigns."



FROM THE WORLD'S SCRAP-BOOK: NEW ITEMS OF REMARKABLE INTEREST AT HOME AND ABROAD.



GOLF BESIDE THE TRENCHES IN DISTURBED CHINA: A PEACEFUL ROUND IN WARLIKE CONDITIONS AT TIENTSIN.

"This 'snap' is," writes Mrs. K. Oldham, "was sent to me by my husband, who is Superintendent of British Police at Tientsin, and gives an idea of the curious conditions which prevail in North China. My husband and Col. Neal of the American Army, who have had a peaceful round of golf, are in warlike surroundings. I imagine that these scenes are part of the defence system for the foreign concession."



CHINESE BOY SCOUTS AT PEKING: A PICTURESQUE GROUP ON DUTY AT CELEBRATIONS OF THE NATIONALIST VICTORY

The Chinese Boy Scouts seen in the above photograph were on duty at the time during the very important meeting held in Peking on July 7, to mark the victory of the Nationalists. This was the Chinese point of view, and, as I understand, written an eyewitness who sends us the photograph, "passed off very quietly, and not much enthusiasm was shown."



JAPANESE PREPARATIONS AGAINST AIR ATTACK: RED CROSS PRACTICE WORK IN GAS-MASKS UNDER REALISTIC CONDITIONS

This picture, we are informed, was taken by a Japanese press photographer. "shows the Red Cross Corps in operation during the manœuvres of the aerial defence force which were held at Otsuka early in July. A smoke-screen is being projected over the field." It is interesting to compare this photograph with others, given below, of English and Russian gas-masks.



WHERE THE KING STAYED FOR GOODWOOD: PITSHILL HOUSE NEAR PETWORTH, AN OLD HOUSE CONTAINING RELICS OF CHARLES II

For this year's races at Goodwood (July 31 to August 3) the King stayed at Pitshill House, Tillington, Petworth, as the guest of Admiral of the Fleet Sir Fredworth Meux and the Lady Meux. Hitherto his Majesty has usually stayed at Goodwood House, but owing to the death of the Duke of Richmond there was no house party there this year. Pitshill contains some relics of Charles II.



A FINE ORANG-UTANG GIVEN TO SIGNORE MUSSOLINI BY THE RAJAH OF SARAWAK: "SAHIB" IN HIS CAGE AT THE ROME "ZOO".

"Sahib," a splendid specimen of an orang-utan, was presented to Signore Mussolini by the Rajah of Sarawak, together with two chimpanzees, as a gift of appreciation. Signore Mussolini, in turn, handed over the orang-utan to the care of the Zoological Gardens in Rome, where "Sahib," in particular, affords great interest and amusement to visitors by his slyness and wit. Here he is seen in his cage.



GAS-MASKED SOLDIERS FIGHTING FOREST FIRES IN SURREY: MEN OF THE ROYAL SUSSEX REGIMENT ON UNUSUAL DUTY AT CHURCH HILL

During the recent drought extensive fires were started in Surrey, particularly at Church Hill. On July 25 further 100 acres were burned, and over 400 men of the Ulster Rifles were rushed to the scene by motor from Aldershot. Local fire brigades were also engaged, and saved an hotel. By 7 p.m. the fire was under control and 100 men of the Royal Sussex Regiment from Bordon were on duty to watch it at night.



RUSSIANS IN GAS-MASKS, AND CAMOUFLAGE SUGGESTIVE OF DUNSIANINE: YOUTHS FROM A SUMMER CAMP ON THE MARCH

"The youth of Russia," writes our correspondent in a note on this photograph, "is going into summer camp for military training, and special attention is given to camouflage and gas warfare. Camped in birch woods, carrying their camp-bags, they have a cross-like impaled branch on the outskirts of the village." The birchwood camouflage recalls the Birnam Wood and Dunstanire incidents in 'Macbeth.'



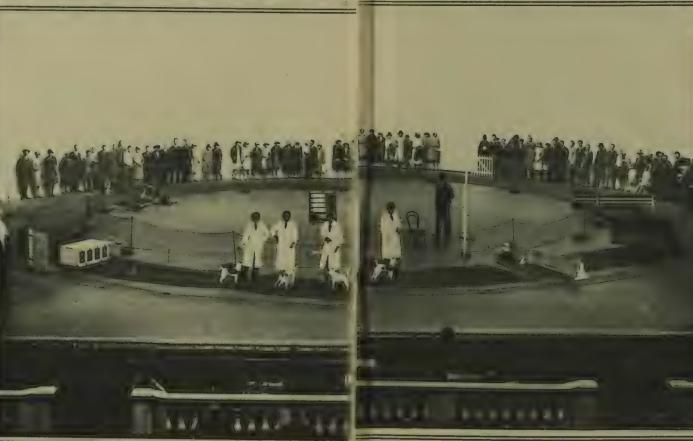
THE BABY RHINOCEROS AT THE "ZOO" SURVEYS HER NEW QUARTERS: "KATHLEEN" AT HER "DESIRABLE BUNGALOW" AND SWIMMING POOL

In sending us this interesting photograph, taken recently at the Zoological Gardens in Regent's Park, a correspondent writes: "Kathleen" is the baby rhinoceros at the Zoo. She has been given permission to leave the sanitarium, and has just taken over a very desirable bungalow in spacious grounds containing a swimming pool. She is here seen surveying her new domain.



THE LONDON REGIMENT OF LONDON PRESENTING NEW COLOURS TO THE 2nd BATT. THE DUFFS (EAST KENT REGIMENT): A PICTURESQUE CEREMONY ON THE H.A.C. PARADE GROUND AT FINSBURY.

On July 27 the 2nd Battalion, the Duffs (East Kent Regiment), according to ancient privilege, marched through the City with bayonets fixed, drums beating, and colours flying, to the salute at the Mansion House as they marched past on their way to the remains of the King. Sir Charles, the salute at the Mansion House as they marched past on their way to the



FOX-TERRIER RACING AT THE COLISEUM: A REHEARSAL OF A NEW MEETING

The new turn, which proved immensely popular with the audience, was introduced into the programme of the Coliseum on July 30, for a run of two weeks. It took the form of a race of fox-terriers, running in pairs in an electric rat was chased for the first time on the stage of a theatre. The meeting, which had all the character of the authentic sport, was held under the official auspices



NEW REVELATIONS OF "THE GRANDEUR THAT WAS ROME": A CIRCULAR TEMPLE OF HERCULES EXPOSED DURING THE NEW CLEARANCE OF ANCIENT BUILDINGS

The work of clearing the ancient sites in Rome, promoted by the Fascist Government of Italy in order to free the remains of classical antiquity from the encroachments of modern civilization, has made many interesting discoveries. The above photograph shows a circular temple which has been exposed during the excavations on the "Argentaria" site. It is tentatively assumed to have been dedicated to Hercules. Another temple, of unknown dedication, has recently been revealed near the Forum of Trajan, and interesting discoveries have also been made in the Forum of Trajan.



GENERAL OBREGON (X) A FEW MINUTES BEFORE HE WAS ASSASSINATED : THE LUNCHEON HELD TO CELEBRATE HIS ELECTION AS PRESIDENT.

General Don Alvaro Obregon, who was President of Mexico from 1920 to 1924, was assassinated (as already recorded in our pages) on July 17, at a luncheon held to celebrate his recent re-election to the Presidency, in a restaurant at San Angel, some twelve miles from Mexico City. General Obregon was seated between Señor Saenz, Foreign Secretary, and Colonel Topete, his

HAPPENINGS AT HOME AND ABROAD: NOTABLE EVENTS FAR AND NEAR.



THE FUNERAL OF THE MURDERED PRESIDENT-ELECT OF MEXICO : GENERAL OBREGON'S BODY ARRIVING BY CAR AT THE NATIONAL PALACE.

campaign manager. At the close of the luncheon a young man diffidently approached the table, showed Señor Saenz some caricatures, and asked leave to sketch the President-elect. As General Obregon turned round, the youth fired five shots at him with a revolver. The General's body was taken to Mexico City, and thence to his native State of Sonora for burial.



SURVIVORS OF THE ILL-FATED POLAR AIRSHIP "ITALIA" AT COPENHAGEN: (L. TO R.) F. TROIANI, A. VIGLIERI, GENERAL NOBILE, N. CECIONI, G. BIAGI (WIRELESS OPERATOR), AND E. PEDRETTI.

General Nobile, the leader of the ill-fated Italian airship expedition to the North Pole, with the other survivors shown in our left-hand photograph, left Copenhagen at midnight on July 29 on their return journey to Italy. They had a cordial send-off from members of the Italian colony and the Danish public. General Nobile, it will be recalled, was rescued by the Swedish airman Lieut. Lundborg. The "Viglieri group" were picked up by the Russian ice-breaker "Krassin."



A TRIBUTE TO GENERAL NOBILE IN DENMARK: A WOMAN SYMPATHISER HANDING HIM A BOUQUET AT THE WINDOW OF A RAILWAY CARRIAGE.



MAIN LINE RAILWAY TRAFFIC DISORGANISED BY A FIRE: TRAINS HELD UP BY A BURNING FACTORY NEAR SOLE STREET STATION, KENT. The main line traffic on the Southern Railway from London to Chatham, Dover, Ramsgate, and Margate was completely disorganised, on July 30, by a fire at Messrs. Leeming and Co.'s varnish factory close to Sole Street Station (shown in our photograph), near Cobham, in Kent. Flames over 100 ft. high were blown across the railway, setting fire to sleepers, trees, and telegraph poles.



THE WORST RAILWAY DISASTER IN BENGAL FOR MANY YEARS: TELESCOPED COACHES AFTER THE DERAILMENT OF AN EXPRESS AT BELUR, NEAR CALCUTTA.

The Calcutta-Gaya express was derailed at Belur, some seven miles from Calcutta, about midnight on July 8, and the train, which contained over 500 passengers, plunged down an embankment. Eighteen people were killed and thirty-two were seriously injured. The engine turned a somersault, and several carriages were telescoped. The railway officials declared that the disaster was the work of train-wreckers who tampered with the lines. Several arrests were afterwards made.

SALVING THE STRANDED CRUISER "DAUNTLESS": NEW PHOTOGRAPHS.



THE SALVAGE OF H.M.S. "DAUNTLESS" (ON RIGHT), STRANDED IN A DENSE FOG ON THRUM CAP SHOAL, NEAR HALIFAX, NOVA SCOTIA: THE CRUISER "DESPATCH" (CENTRE) AND THE SLOOP "HELIOTROPE" (LEFT), AIDED BY TUGS, TOWING HER OFF AFTER REMOVAL OF HER HEAVY GUNS AND OTHER MATERIAL.



H.M.S. "DAUNTLESS" AFTER HAVING BEEN TOWED INTO THE INNER HARBOUR AT HALIFAX, NOVA SCOTIA, BEACHED TO PREVENT HER FROM SINKING: A VIEW OF THE STRANDED BRITISH CRUISER, LIGHTENED BY THE REMOVAL OF HEAVY GUNS AND DECK STRUCTURES, SURROUNDED BY TUGS IN SHALLOW WATER OFF SHORE.

Since we illustrated the stranding of H.M.S. "Dauntless," we have received these further interesting photographs showing the salvage operations. A Naval eye-witness writes: "The C.-in-C., America and West Indies, at Bermuda, received the news on the night of July 2, and left in H.M.S. 'Despatch' on July 3 at about 9.30 a.m., arriving off Halifax on the 4th at about 6 p.m. It was decided to lighten the 'Dauntless' as much as possible, and the combined crews of 'Dauntless' and 'Despatch' worked hard dismantling guns, torpedoes and torpedo-tubes, and removing provisions, ammunition, and wireless equipment. So well

did the ordnance artificers work that the salvage company's crane 'Kitchener' was able to hoist out all heavy guns in one day—believed to be a record. The funnels were also removed, and the flooded compartments filled with compressed air. By the 11th the ship was considered buoyant enough to be towed off. Accordingly, at high water, the sloop 'Heliotrope' assisted by two Canadian salvage-tugs, began to tow 'Dauntless' astern, while H.M.S. 'Despatch' towed her off broadside-on. The attempt was very successful. The 'Dauntless' was towed up harbour without the slightest hitch, and is now waiting to be dry-docked."

THE FINE ART OF COLLECTING.

XXIII.—OLD SCREENS: THE NERVOUSNESS OF OUR FOREFATHERS AS TO HEAT AND LIGHT.

By ARTHUR HAYDEN, Author of "Bye-Paths in Collecting," "Chats on Old Silver," "Old Sheffield Plate," etc.

THE screen in comparatively modern furniture is a development of the fan, a necessity in climates outside the temperate zone. Primarily, it was a protection against the heat of the fire in the dining-hall; later it became a protection for the eyes against candle-light. But there are other uses: it may be a shield against errant draughts in northern climates, and, artistically, it may cut off a room and, behind its folds, afford a cubicle of privacy.

Accordingly, these various purposes are found in the examples the collector finds offered for his examination. What the screen was in architecture, as a partition, or a *parclose*, separating one portion of a church from the rest, either of wood paneling or of stone, it has become in domestic furniture. In great halls the passage behind an erected barrier, for the use of the servants, was termed "The Screens." It is Alexander Pope, mirror to eighteenth-century styles, who speaks of "a charming Indian screen," which undoubtedly was as Chinese as Garrick's bed at Hampton! Dean Swift offers a closer study in recording that "ladies make their old clothes into patchwork for screens and stools."

Collectors of English furniture from the seventeenth to the twentieth century have a wide selection. At first consisting of paneling and mainly fixtures, screens were removable later. On wooden framework, they included needlework and tapestry. At the sale of the possessions of Charles I., after his execution, there is mention of screens embodying embroidery of gold and silver.

The later Stuarts, for instance, in the reign of Charles II., had "India Chimney screens," and Oriental varieties of large dimensions, coming from China. Naturally, the same importation of lacquer panels from the East, used in furniture, offering a nicety of measurement befitting the long-case clock panel, made an equally engaging appeal for use in hinged screens.

The nomenclature of the screen is worthy of note. Six-fold screens, decorated on both sides in black and gold lacquer, came direct from the East, through the agency of the Honourable East India Company. Whatever may be the final opinion of experts as to lacquered furniture reaching this country in its entirety, there is always room for revision of judgment. Cabinets with Chinese metal escutcheons and hinges and an array of drawers and pigeon-holes undoubtedly came over. But the English and the Dutch cabinet-makers in the late seventeenth century, and subsequently, were alive to their own interests as creators. That Oriental prototypes found themselves embellished as cabinets on gloriously carved silvered and gilded stands is as true as that Chinese

porcelain vases were mounted on ormolu garniture by the craftsmen of France. But there is the Martin family, who stand out as the inventors of that celebrated varnish, *Vernis Martin*, as much an echo of the Eastern importations in lacquer as was the glorious Delft of the Dutch potters dating from the early seventeenth century a simulation of porcelain.

But screens coming from Canton and Nanking, folded as they were, were easily transported. By reason of this it may be regarded as something more than an assumption that such lacquer screens are actually wholly Chinese, without an added factor by the English cabinet-maker (see illustration C). It is true that a person, quite at a late date, less than a century ago, found something wanting on imported delicacies in Oriental porcelain! He—his name, either Dutch or German, was Klobber or Globber—and a school of imitators filled in the white portions of Chinese ware with a nasty criss-cross design in the spandrels, so to speak, of a dirty puce colour, firing his *diableries* in a glost-oven at lower temperature than the original porcelain. As far as we are aware, nobody has ever attempted this in regard to the old Oriental screens coming straight from China.

Another term for screens is "cheval," which was certainly not used at the time they were made. Indeed, the adjective, suggesting some departure from ordinary dimensions, cannot be applied to the seventeenth century, when screens, in accordance with domestic requirements, took upon themselves a smaller and a minor place. It is hardly to be supposed that the drop from the architectural "rood screen" and the great Oriental screen of even twelve folds would contemporaneously be called "cheval." But modern nomenclature has adopted this. Naturally, we find Chippendale, in the middle of the eighteenth century, finding exact definitions in a trade catalogue peculiarly appropriate. He speaks of a "Horse Fire Screen," which he illustrates, as differing from a pole-screen of lesser size. His generic description on his title-page is "Fire-Screens." His "Director" affords some pretty examples. Of course, there is the swirling mahogany roccoco frame. In one example he offers the needlework picture of the Stork driving his beak into a narrow-necked vase, and being contemplated by the Fox, as in Aesop's fable. Other examples on legs depict Chinese subjects. Hepplewhite, in his "Cabinet Maker's and Upholsterer's Guide," published in 1788, follows on. What he terms "Pole Fire Screens" he illustrates with heart-shaped, oval, and circular panels capable of sliding up and down.

The comparative difference between the two is exemplified in the two specimens illustrated, recently offered for sale by Messrs. Christie. The one (B) is a mahogany "Fire Screen" on supports carved with foliage and claws, having a panel of fine needlework with Cupid and flowers, in coloured silks and wool. The other is a tripod screen with ball-and-claw feet, and the screen has a panel of needlework with a basket of flowers in coloured silks (A).

Coming quite within the ambit of the minor collector is a curious green silk fan-screen, belonging, perhaps, to the early days of gas illumination, certainly long before electric light, and possibly in the days of the flickering candle. Its usage recalls Bacon's recondite diction but rather obvious

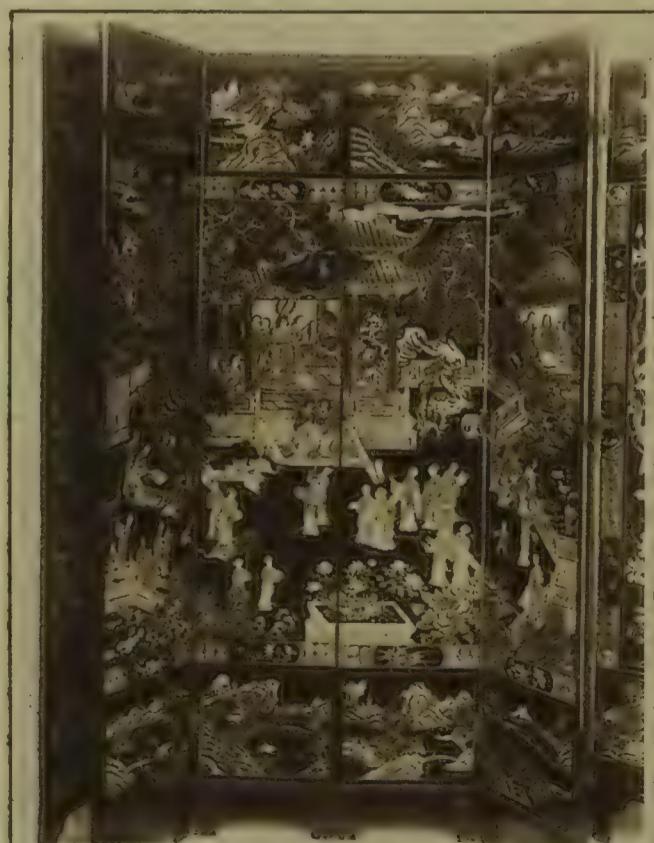
conclusion, "When there is a screen between the candle and eye, yet the light passeth to the paper upon which one writeth." This particular invention, just within a century, may offer something prettily suggestive of exactitude in safeguards affording protection against inroads upon health. It is the last note of instinctive safe-guarding arrayed against oncoming scientific intrusion. It was at this same particular moment that very wise people, no other indeed, than our own forebears, determined that steam carriages should run on roads of their own across the country and on steel rails, and not disturb the "King's Highway."



B. A CHIPPENDALE MAHOGANY FIRE-SCREEN: A SPECIMEN HAVING A PANEL OF FINE NEEDLEWORK WITH A CUPID AND FLOWERS. The needlework measures 36 inches by 26½ inches.

Reproduced by Courtesy of Messrs. Christie, Manson, and Woods.

graver conception, the mobile screen seems to have appealed to the cabinet-maker as a piece of artistry to which he might give a touch of grace and personality. He has often done this. It is for the collector to seize him at the right moment.



C. DOUBTLESS WHOLLY CHINESE, WITHOUT ADDITIONS IN ENGLAND: PART OF A SIX-FOLD CHINESE SCREEN.

Reproduced by Courtesy of Messrs. Gill and Reigate.

TO BE RECONSTRUCTED WITH REMAINS AND CASTS: THE ARA PACIS.

PHOTOGRAPHS BY ALINARI BROS.; SUPPLIED BY PROFESSOR FEDERICO HALBHERR. THE RECONSTRUCTION-PICTURE OF THE SACRIFICE OF THE SUOVETAUERILIA BY PROFESSOR FORTI.



ONE OF THE ORIGINAL RELIEFS OF THE ARA PACIS, WHICH IS TO BE RECONSTRUCTED ON THE CAPITOL IN FRONT OF SIGNOR MUSSOLINI'S NEW ROMAN MUSEUM: TELLUS, THE EARTH, NOURISHING MANKIND.



THE FLAMINES: SOME OF THE FIGURES IN THE PROCESSION OF THE SPLENDIDLY LIFELIKE FRIEZE OF THE ARA PACIS, WHICH ILLUSTRATES SCENES CHIEFLY OF A RELIGIOUS CHARACTER.

THE famous Ara Pacis, an altar of the Goddess of Peace which is a masterpiece of the Golden Age of Roman Art, was dedicated by the Roman Senate in honour of Augustus, soon after the triumphal return of that Emperor from the German and Gaulish victories in the year 13 B.C., when the pacification of all the Roman Provinces was considered to be an accomplished fact. Built in the middle of the Campus Martius, it occupied a large space corresponding with the modern block of houses at the corner of the Corso and Via in Lucina; and most of the remains discovered have been found, at a considerable depth, beneath the foundations of the Palazzo Fiano. In its day, there was no monument of the kind with which it could be compared, save the great Altar of Pergamon, in Asia Minor. Like this, it rose in the centre of a large paved place surrounded by four wings of porticoes; looking like a temple in the midst of its courtyard. It was constructed throughout of blocks and slabs of Carrara marble—it was the first Roman building in which Italian marble was substituted for the Greek marbles previously in use—and it reached a height of about 27 feet. Its walls were sculptured all over with scenes in high relief; above a basement adorned with floral decorations which have been classed among the most exquisite productions of the Augustan era. The figures of the frieze along the walls,

[Continued opposite.]



A CEREMONY THAT IS AMONG THE SCENES PORTRAYED ON THE FAMOUS ALTAR OF THE GODDESS OF PEACE: THE SACRIFICE OF THE SUOVETAUERILIA, A RITE CHIEFLY OBSERVED AT TRIUMPHS; WHEN A BULL, A LAMB, AND A PIG WERE THE VICTIMS.

which run in processional order, as in the frieze of the Parthenon, are chiefly of a religious character and relate to the solemn celebrations of the "Pax Romana" and to the great sacrifices offered to the Gods, in the Forum and on the Palatine, after the homecoming of the Emperor. In the procession are to be seen the family of Augustus himself, the Senators, the Flamines, and the highest magistracies of the State, walking magnificently. The portrait-heads in the group of the imperial house are reproduced in so naturalistic a manner that it is possible at once to recognise amongst them the two noble figures of Antonia Minor, with her husband, Drusus, and their little son, Germanicus; and of Antonia Major, with her husband, L. Ahenobarbus, and other boy princes of the family. One of the

[Continued below.]

finest among the other scenes is that of the sacrifice of the Suovetaurilia performed in front of the house of Augustus. This was a State Sacrifice by the Romans, the rules of which date from the time of King Servius Tullius. In later years the ceremony was observed chiefly at the feasts of the Triumphs of Generals and Emperors back from the wars. The victims were three: a bull, a lamb, and a pig; whence the name. They were led in the procession, adorned with garlands and gilded ribbons. The two reliefs to the right and left of the door dealt with the sacrifice to the Penates, or family Gods, of the imperial



THE SENATORS: A SECTION OF THE FRIEZE OF FIGURES IN PROCESSIONAL ORDER ON THE ARA PACIS, A MASTERPIECE OF THE GOLDEN AGE OF ROMAN ART.



THE FAMILY OF AUGUSTUS IN THE FRIEZE: ANTONIA MINOR WITH HER HUSBAND AND HER LITTLE SON; AND ANTONIA MAJOR WITH HER HUSBAND AND OTHER BOY PRINCES.

Continued.]

house, and the symbolic representation of the Goddess Tellus, the personification of the Earth, one of the most excellent of Roman sculptures in high relief, if not the finest. For our knowledge of these details of the monument we are indebted to the oft-repeated attempts to excavate it—the most recent of which was made in the year 1903. These endeavours did not end in the complete discovery of the building; nevertheless, they proved very fruitful, as they permitted the revelation of the principal parts of its plan and construction, and the gathering of certain examples of its marvellous sculptures. Unfortunately, these fragments

were scattered here and there; chiefly to the Gallerie degli Uffizi at Florence, to the Vatican Museum, to the Diocletian Thermae at Rome, and to the Louvre in Paris. And others are believed to lie forgotten in other collections. The Fascist Government, wishing to restore to its original state this glory of Rome, has decided to resume work on the site and complete the labour of research; but, as there is no possibility of bringing to light and reassembling the whole of the remains, it will rebuild the Ara Pacis with such of the sculptures as exist in Italy, and casts of those which are out of Italy.

CONTROLLING THE MOSQUITO IN BRITAIN: CAMPAIGN METHODS.*

By R. E. TURNBULL.

public grants, and is entirely dependent for support on voluntary donations and the fees of members.

Mosquitoes abound in many other places in Great Britain besides Hayling Island, and a description of the best way to control their numbers will be welcome to residents and municipal authorities in localities which suffer from the nuisance. First of all, however, a short description of mosquitoes themselves and of their breeding habits is necessary.

A mosquito is a two-winged insect with a long beak, or proboscis, which is really a sheath concealing a bundle of six instruments designed for puncturing the skin and sucking the blood of animals or human beings. A meal of blood is probably a necessary preliminary to the process of egg-laying.

The eggs hatch out into larvæ, small wriggly creatures often seen in stagnant water. The larvæ of the Anopheline tribe lie horizontally on the water and breathe through a pair of orifices situated in their stomachs. The Culicine larva lies head downwards in the water, because its nostrils

are a pair of tubes near its tail. Larvæ change their skins four times during growth, and each successive change is called an "instar." After the fourth "instar," the larva becomes a pupa with a lobster-like tail; it rests tail downwards in the water, taking air through a pair of tubes growing out of its throat. At the end of a few days it splits open and the adult mosquito struggles out. Male mosquitoes always have long, tufted antennæ and "palps," a kind of secondary antennæ; whereas the females wear them short and slender. Hence the two sexes can always

be distinguished. It is a curious fact, and one that ought to give pleasure to misogynists, that only the female mosquitoes annoy us and bite us and suck our blood! The males are harmless.

As has already been indicated, then, the life of a mosquito passes through four stages: the egg stage, the grub or larva stage, the pupa stage, and finally the winged-insect stage. The first three stages are spent in stagnant water. The two principal methods of control are: (1) To prevent the mosquitoes from breeding; (2) To destroy their larvæ before they develop into the winged-insect stage. The first method is a permanent cure, and entails work of an engineering nature—drainage operations, filling cavities in the ground, or removing obstructions to the flow of water. The second method is merely temporary, and consists in smothering the larvæ with a film of oil on the surface of the stagnant water, or poisoning them by mixing sub-

Paraffin is generally the cheapest except in wind-swept areas, where the film of oil has to be comparatively thick. For treating breeding-places of fairly small size, a "one-handed" pneumatic sprayer as

used by fruit-growers may be employed. It has been found that in ordinary circumstances a pint of paraffin is sufficient for every 40 square yards of surface. If larvicides are used, it must be remembered that these distribute themselves throughout the entire volume of water, and therefore the depth must be taken into account in estimating the amount required. A certain sanitary fluid containing 20% soluble creosol has been found satisfactory; one gallon will effectively kill all mosquito larvæ in 28,000 gallons of water.

Both methods of control (permanent and temporary) are usually carried out in conjunction, but mosquito control is not so simple as it sounds at first; there are many complications. To begin with, there are three different types of mosquitoes, each having different habits: (1) The domestic mosquitoes, which breed in rain-water tubs and have such an affection for us that they spend the winter months in the attic or cellar of our houses, or in outhouses such as cow-sheds and pig-sties. They may be destroyed to some extent by spraying or fumigating and by treating water tubs with paraffin or larvicide. (2) The rural mosquitoes, which breed in woodland pools, non-salt swamps, rain-water tubs and rain-filled cavities in trees. (3) The salt-marsh or coastal mosquitoes, which breed in stagnant salt water. These have a longer range of flight than the other types, and their breeding

A SPECIMEN OF THE SEX THAT BITES US: A FEMALE OF THE THREE KNOWN VARIETIES OF ANOPHELINES TO BE FOUND IN GREAT BRITAIN.



A SPECIMEN OF THE SEX THAT DOES NOT BITE US: A MALE OF ONE OF THE TWENTY-TWO KNOWN VARIETIES OF CULICINES TO BE FOUND IN GREAT BRITAIN.

MOSQUITOES are of two kinds—or, rather, they are of 1400 kinds—but they may be generally classified into two tribes, the Anophelines and the Culicines. Anophelines have the power to spread malaria, yellow fever, and other diseases; and the bites of either kind cause irritation, swellings, and sometimes blood-poisoning.



A TYPICAL BREEDING-PLACE OF THE SALT-MARSH MOSQUITO: WATER-LOGGED GRASS-LAND NEAR THE SEA-SHORE.

In Great Britain there are three known varieties of Anophelines and twenty-two of Culicines, whilst one more of the latter (*Aedes vexans*) was reported not very long ago as causing trouble in the North Finchley district. Although the British varieties of Anophelines are seldom disease-carriers in this country, owing to conditions not being favourable, both they and the Culicines are a decided nuisance; when present in sufficient numbers they can be an intolerable nuisance. This was found to be the case at Hayling Island, until Mr. J. F. Marshall, M.A., F.E.S., went forth to slay the dragons—if by any stretch of imagination a mosquito can be extended into a dragon! Before he waged war on the enemy, people in the central residential district could not sit out in their gardens without first wrapping their feet and legs in rugs.

It was in 1920 that Mr. Marshall first made preparations for his attack. The species responsible for the nuisance at Hayling Island was identified as one of the Culicine tribes (*Aedes detritus*) known to breed in brackish waters. The most likely breeding-places were the salt-marshes about a mile and a half from the central residential district, and later on this was found to be the true source of the nuisance. Early in 1921, a meeting of seventy leading residents was summoned to discuss ways and means for a systematic campaign. It was decided to form an organisation called the "Hayling Island Mosquito Control," and to appeal for voluntary assistance and financial support from every householder on the island. Mr. Marshall, who was appointed Honorary Director of the General Purposes Committee, organised the work in a very thorough way. The ultimate success of the enterprise has been proved by a postcard canvass: the neighbourhood has been freed from mosquitoes, and people can now even sleep out of doors in comfort.

The "Hayling Island Mosquito Control" still continues to function, but its name has been changed to "The British Mosquito Control Institute," and, thanks to the energy of Mr. Marshall, its scope has been greatly enlarged. In fact, it has now become of national, instead of local, importance. A new building on Hayling Island to house the institution was opened in August 1925, and the opening ceremony was attended by nearly every entomologist of distinction in this country, including Sir Ronald Ross, K.C.B., K.C.M.G., F.R.S., Director in Chief of the Ross Institute and Hospital for Tropical Diseases. It will be remembered that to Sir Ronald belongs the credit of being the first to make the world-famous discovery that malaria is transmitted from man to man by the bites of mosquitoes. Although it is recognised and encouraged by the Ministry of Health, The British Mosquito Control Institute receives no



A PRECAUTION AGAINST MOSQUITO-BREEDING: A DITCH DUG TO DRAIN STagnant SALT WATER FROM AN INTER-TIDAL ENCLOSURE.

places may be some distance from the centre of their activities. Neither the rural nor the salt-marsh mosquitoes live through the winter.

It will be seen, then, that the first thing to do is to identify the prevalent type of mosquito, and the next to find its breeding-place. The best way to proceed is to secure some specimens of mosquitoes and send them to the Institute to be examined; then search likely places for the larvæ. Some species lay their eggs separately, and others in floating rafts of about 300; but it is the larvæ that should be looked for more especially, and having secured some specimens these should also be sent to the Institute for identification. Specimens of mosquitoes are caught by waiting until they settle, and then "slipping one over them," as the Americans would say. In this case it means slipping a killing-tube over them. A killing-tube may be made of an ordinary test-tube, or any small phial, in the bottom of which is a wad soaked in petrol and held in place by a cardboard disc. The tube should be kept corked when not in use.

To secure specimens of larvæ, a kind of fishing-net may be made of an old handkerchief terminating in a wide-mouthed bottle, or an ordinary hand-bowl may be used. Water should not be treated with larvicide unless the presence of mosquito larvæ in large numbers has been observed, because stagnant water such as pools and ponds frequently contains fish, water-bugs, and various other insects that feed on the eggs and larvæ of mosquitoes, and if these natural enemies of the mosquito are destroyed, more harm than good may result.

Permanent engineering works should be undertaken where possible, either to remove the water or to prevent stagnation. And it must be noted that the larvæ of certain species of Anophelines can develop in slowly running water if provided with anchorage by surface vegetation.



USED FOR COLLECTING LARVÆ: A FISHING-“NET” MADE OF AN OLD HANDKERCHIEF, AND TERMINATING IN A WIDE-MOUTHED BOTTLE.

stances called "larvicides" with it; these larvicides should be non-injurious to animals or human beings.

The decision whether to use oil or larvicides depends on local circumstances, and the relative cost.

LET us 'quiz' the quizzing glass — ancestor of the monocle—that disc of clearest crystal which adds distinction to the distinguished and folly to the fool.

What deliberate disdain it may convey in the hand of one.
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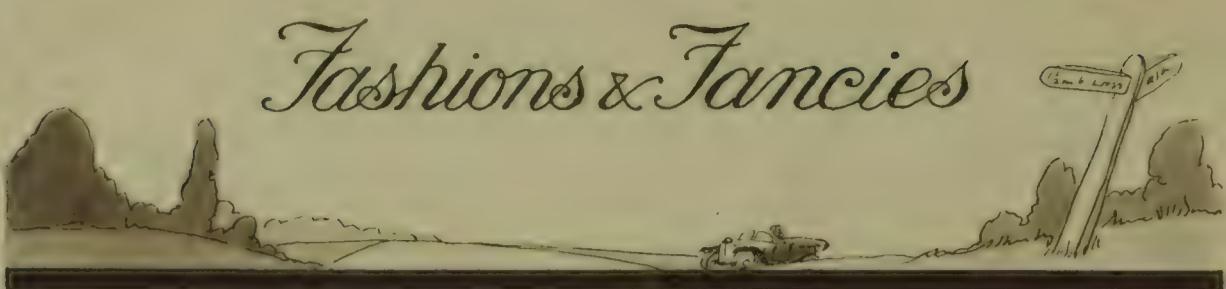
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Extraordinarily slim and well-fitting for a leather coat is this smart model for motoring, which is made by Messrs. Dunhills, of Conduit Street, W. It is in navy blue, collared with nutria.

Flowered Chiffon Coatees. The short evening jacket has become an established mode now. It is a very practical one for the holidays, when one dines *al-fresco* on hotel-verandahs and takes short "revivers" of air during the evening's play in the heated Rooms. Earlier in the season, these little coats were made entirely of sequins, but the latest versions are softer and more becoming, gossamer affairs of flowered chiffon with the collar formed by a chain of silken flowers and the wrists caught in by large "floppy" posies to match. These are worn indiscriminately over pale-coloured georgette and even satin frocks; but if the material is patterned the coats, of course, must match. One charming little coatee of this kind is in nimon printed with corn-flowers and poppies on a honey-coloured ground. The collar is in the form of a scarf, which has a posy of the actual flowers (made in silk) at the end—a very novel spot for floral decoration, but an effective one, for the tassel of flowers not only looks amusing hanging down the back of one shoulder, but it also helps to weight the scarf and keep it in place.

Signs of Autumn. The moment the word "Scotland" is mentioned, women begin to think of new tweeds and autumn fashions. There can never be much variation about the shooting costume. The Paris designers have tried for many seasons to bring in the divided skirt on the "plus four" principle, but a well-known tailor tells me that they have given up the idea in despair for Englishwomen, who prefer the short, well-cut skirt with, as a slight concession, small plus fours to match underneath. A peculiar shade christened Afgan brown is a smart colour this season, expressed in tweeds and worsteds. It is a very deep nuance of beech, which looks especially effective worn with those light "natural" jumpers banded to match the suit. Travelling coats of camel-hair, which is as light



as a feather and is dyed to lovely colourings, are useful as well as fashionable, for they make warm steamer rugs in their spare time.

For a Motoring Holiday. Every year the great north roads become more and more crowded during August, for it has become the custom to travel up leisurely by road, enjoying a motoring holiday on the way. For this purpose, a leather coat is essential. Not the heavy, old-fashioned kind that must be left in the car when you enter a hotel, but a slim, well-cut coat fitting as perfectly as if it were made in tweed. These are a speciality of Dunhill's, of Conduit Street, W. They make them from nine guineas, using the very best leathers, remarkably soft and supple, dyed to lovely colours. The one sketched on this page is carried out in navy-blue leather, cleverly cut with a yoke fitting the hips to keep it slim. It is collared with nutria. Tweed coats and sports jerseys or cardigans are also a well-known speciality of this firm.

Travelling Hats in Felt and Straw. Felt has become a uniform for travelling hats, but they are varied in so many different ways this season that every one should be entirely individual. Two attractive new models from Robert Heath, of Knightsbridge, S.W., are sketched on this page. The one below is of felt decorated with silk stitching and encircled with corded ribbon. Above is the first of the autumn hats, carried out in light velours, trimmed with two little quills of the same material as the hat, bound with petersham. There are felts and velours in every shape and size available in these salons, where, it must be noted, special attention is given to large fittings and the needs of the older woman.



Undies Which Prevent Chill.

During the holiday season, when strenuous sports are the order of the day, the body is subjected to so many varying stages of heat that it is a very easy matter to catch cold. Ideal undies for preventing chills are those made of the Aertex cellular fabric, for they are light, open to the sun's rays, and so designed as to provide a mantle of air imprisoned in thousands of tiny cells, which keeps the body at an even temperature. The material is wonderfully soft and smooth, and is made up in pretty garments such as the nightie pictured below. An advantage of Aertex underwear which appeals to every sportswoman is the fact that you can wear the minimum number of clothes and still retain just the right amount of warmth. For children, they are a protection against all ills. Aertex lingerie for every member of the family is obtainable at all the leading outfitters.



Cool in summer and warm in winter is this pretty Aertex nightdress, made in the famous cellular fabric which keeps the body at an even temperature and prevents chills.

Ready for the early autumn are these trim little hats from Robert Heath's, Knightsbridge, S.W.; one in velours, trimmed with petersham, and the other in felt decorated with silk stitching.



BY APPOINTMENT



A SUNNY DAY ON THE RIVER

Cool, restful and peaceful, and oh ! how wonderfully lazy. Soon it's tea time and you stretch for the hamper — packed so carefully, down to the last and most important detail —

Cerebos
SALT

FORGERIES AND THEIR DETECTION.

(Continued from Page 202.)

chemicals also bleach ink, and such solutions are constantly used by forgers. I have no hesitation in giving these details, for I shall show that it can now be proved infallibly that a figure or a word has been so treated. Unfortunately, a document is generally sent to the police laboratories only after the fraud has been discovered, when in most cases the harm is done. I should therefore like to suggest several methods by which it can be determined at once, without the help of an expert, whether a receipt, bill of exchange, letter of credit, or cheque has been tampered with. If a knife has been used, a small quantity of petrol poured on the paper will quickly spread out where the surface is intact, but will not spread to the part which has been altered. Finely powdered oxide of copper obtained by electrolysis (every police laboratory has a stock of this, and would willingly place some at the disposal of banks), if it is lightly strewn over the paper and then shaken off, will adhere thickly where a paper has been bleached, knifed, or otherwise tampered with, but not to the normal surface. Finally, if the document is held against a powerful lamp and examined with a magnifying glass, the fraud at once becomes apparent—either because the paper is thinner where the forger has been at work, or, if he has added an artificial glaze, because it is more opaque there.

The police laboratory has many infallible methods besides these rudimentary tests. The first thing the expert examines is the ink. It is almost impossible for the forger to obtain an ink absolutely similar to that originally used. It may look the same to the eye, but there are several instruments which at once reveal a difference, although this difference may be only due to age or exposure to the air. One of the most sensitive instruments for detecting a variation in the ink is the spectrograph. A microscopic particle is taken by a special needle from several letters or figures. These are compared by means of double prisms, and the slightest change in the colour becomes evident. Then there is the magical ultra-violet ray. Exposed to this, not only that part of the paper which has been altered glows with a different fluorescence, but so does the ink. But the latest and most conclusive of demonstrations is obtained by a species of electrical apparatus combined with a loud-speaker and wireless valves, which is also used for many other tests.

The ohmic resistance of the normal paper and ink produces a definite musical sound. When the maximum has been determined by a sliding rheostat, the current is passed through the suspected part. A difference so minute that no other method could reveal it at once produces a change in the whistling vibration. Bleaching or knifing is, therefore, infallibly detected.

When it has been ascertained that words or figures have been effaced, it is important that these should be made to reappear, in order to discover what they originally were. Even this can be done efficiently and accurately. No matter how thoroughly the chemical appears to have done its work, there is still some trace of the writing left, although it may be quite invisible. But the camera can reveal what the eye cannot see. The manner in which it was first discovered that certain photographic plates are sensitive to latent deposits is curious. A German photographer one day received the visit of an extremely pretty girl whose chief beauty lay in her exquisite colouring. He exposed a number of negatives, and, in order to obtain a true rendering of the tint of her eyes, hair, and complexion, he used orthochromatic plates. Much to his astonishment, when these were developed, the face was mottled on every one by stains and blotches. Under the impression that the makers had sent him a faulty batch of plates, he at once wrote to his client and requested her to sit once more. Although he sent several letters, there was no reply. Two months later the same lady called, horribly disfigured, to examine her proofs. She had just recovered from a severe attack of small-pox, which declared itself two days after the sitting. The camera had faithfully reproduced the inflammation already latent under the skin, although it had been invisible to the eye!

Since then the camera has become the most potent instrument for photographing the invisible. First of all, the photograph of a suspected document, taken with orthochromatic plates, will infallibly reveal that certain parts have been bleached. Furthermore, it will bring out the effaced writing. A negative is made and developed in the usual manner. This negative is then reduced and afterwards intensified with mercury perchloride. When dry, it is placed in a printing frame and, instead of paper being used, a second plate is exposed by contact. This is again developed and intensified. The process is continued until at the sixth or seventh negative the colourless traces of the

effaced writing stand out clearly. If the artificial glaze, or the words written over it, are in the way, the paper is soaked in glycerine, and photographed by transparency. This method is also employed in order to read what has been struck out by lines, blots, or words written thickly over the original matter. The work is much simplified if the ink used by the criminal is not absolutely the same colour as the writing beneath it. For instance, if a paper with yellow and red lines on it is illuminated by a ray of red light, the yellow lines will be clearly visible, but the red lines disappear. If, on the contrary, the illuminating ray is yellow, the red lines stand out boldly, but the yellow become invisible. This phenomenon is utilised in the police laboratories by means of the chromoscope. This is in reality a projector with four lenses. Three are covered by suitably coloured screens and the fourth is unscreened. The colours can be combined with such precision that any tint can be produced. When the right mixture of colours has been obtained, the covering ink becomes invisible, and a photograph taken with a complementary screen reveals only the writing which was hidden to the eye. This chromoscope is used to eliminate certain tints in counterfeit bank-notes, or in bringing out invisible stains on multi-coloured silk, clothing, or paper. It was recently employed in a murder case where it was imperative to read the undecipherable postmark on a stamp. The colours were so blended that the stamp became invisible, leaving only the postmark.

Another method for reading bleached writing, based on the fluorescence of metallic inks, is to expose the incriminated document to the ultra-violet ray. Only lately this ray cost a forger his liberty. He had, indeed, used the same ink to fill in a blank space; but whereas the authentic part had been written in a room free from dust the forger had used an open ink-well in which minute particles of dust had settled. When the document was placed under the ultra-violet lamp and examined with a microscope, certain words and figures were seen to be speckled with the vivid scarlet so characteristic of Rhodamine. These words and figures were obviously forgeries. Several men were suspected, but the investigation disclosed the fact that one of them lived next door to a dye factory where Rhodamine was constantly used. Similar particles were found in an open ink-bottle and on the furniture in his room. He was arrested, and confessed. There is another subtle method much employed

(Continued on page 238.)



Warwick Castle.

Foundation decreed by King William in 1068. Illustration shows Guy's Tower, built by the two Earls Thomas in the fourteenth century.



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THE WORLD OF MUSIC.

WHAT IS MUSIC?

IN Mr. Cecil Gray's recently published "History of Music," he attempts to sketch an outline of musical aesthetic which is an interesting effort on a subject of notorious difficulty. Most philosophers and writers on aesthetics have gone badly astray when they have come to deal with music. Even upon the definition of music they are not agreed.

According to Dr. Charles Burney—as Mr. Gray reminds us—music is "an innocent luxury, unnecessary, indeed, to our existence, but a great improvement and gratification of the sense of hearing." It was typical of Dr. Burney's age to believe that music was "unnecessary to our existence." But what is necessary to our existence? Surely the answer to this question depends upon the nature of our existence. To exist merely as the bear exists, many things which even Dr. Burney would have declared to be necessary are really unnecessary—clothes, houses, and cooked food, for example. Primitive man did not even find money to be necessary. He could exist without all the "necessities" of a modern man's life. And we might say that every "necessity" was once a luxury. It all depends, surely, upon the kind of life whether we declare a thing to be necessary or unnecessary.

But as man evolved from the brute state he invented the arts, and the arts have become as necessary to man as food, clothing, and housing. One might even say more necessary, because it is by his possession and enjoyment of the arts that man differs from the beasts and is man. What Dr. Burney really meant by declaring music unnecessary was that without music man might cease to be man, but could still exist as a beast; whereas, if we took away his food, he would cease to have even that existence.

Another example of the extremely limited perception of Dr. Burney's attitude—an attitude which was typical of his time—is given in his praise of music as making for "a great improvement and gratification of the sense of hearing." Here we see the same narrow utilitarian standpoint. The idea that listening to music improves the sense of hearing, and may therefore be of practical importance, is an extremely comic one. The sense of hearing is

conceived of as an organ susceptible of training and development; but Dr. Burney and his century never asked themselves to what end this training and development of the organ of hearing could be directed.

I can imagine an American Burneyite preaching to the white pioneers that they should listen to music in order to train their ears so as to have as keen hearing as the Red Indians; and in a country and at a time when everything has to be turned to immediate practical use, such a gospel would not only be intelligible and popular, but it would be the only gospel men would listen to.

But as soon as men realise that life is being lived from generation to generation, and that it is not the mere living, but the kind of living, that matters, then everything is seen from a different aspect. Music, like every other art, is a form of life; it is an expression of human energy. Mr. Gray says—

Music has never produced creative artists who were at the same time thinkers of the calibre of, say, Goethe or Leonardo da Vinci. Musicians have always been content to have their thinking done for them, sometimes with disastrous results, as we have had occasion to observe in the course of our narrative. They have, indeed, been so long reproached with being inarticulate and unable to express themselves in language that others could understand, that they have even begun to take a secret pride in it, as if it were a virtue and not, as it actually is, a serious defect. They like to feel that, in the words of Browning, "the rest may reason and welcome; 'tis we musicians know."

I am not sure that this is quite correctly stated. It is true that musicians are often poor reasoners; on the other hand, they are frequently extremely good reasoners. But the same would apply equally to poets. Shelley had a lucid brain and a more than average capacity for close, sustained reasoning; the same was true of Keats, whose letters are among the best in our language. Coleridge had one of the finest metaphysical minds the world has ever known, and it would not be overshooting the mark to compare him with Plato as a thinker. On the other hand, there have been fine lyric poets who were poor reasoners. But when Browning said "the rest may reason and welcome; 'tis we musicians know," he was saying what is profoundly true, and by "musicians" he meant poets also, and artists generally.

Modern science has now admitted that science tells us nothing whatever about substance, but only

about structure. This distinction between the structure of life and the substance of life, between the essence of the universe and the form of the universe, is extremely useful in helping us to realise the function of the artist. If the scientist deals with the structure of the universe, the artist, on the other hand, deals with the substance—that is why Browning says "'tis we musicians know." The poet and the musician have a direct apprehension not of the forms of life, but of life itself. This truth has been often expressed in many ways. For example, a great painter, in painting a tree, does not give you the outward tree as the ordinary man sees it, but some more direct and intimate sense of the tree, something which has been called the "tree-ness" of the tree. It is this direct apprehension of the inner life of a tree which gives us such a shock of pleasure when we see his painting. And the same is true of poetry and music. The content of a poem cannot be given in any analysis or paraphrase. If you try to put down in prose the content of "The Ancient Mariner," you will leave out everything which makes it a great poem; for the content of "The Ancient Mariner" is not a story about a sailor who shot an albatross, or a moral to point out how sinful cruelty is; it is the total *ensemble* of the words of the poem which have a life and significance that is directly communicated to the reader and cannot be communicated by any other assemblage of words.

So, it is quite impossible to tell anyone what is the meaning or content of a Beethoven quartet or a Mozart symphony, for the meaning is not a logical or rational one that can be put into different words; it is a living creation, a complete whole, which affects the listener as a whole, just as the sight of another human being does. How can we express the "personality" of a human being in a reasoned statement? It is quite impossible, because it is impossible to explain the greater in the terms of the less. What we call "personality" is a whole not to be analysed. You cannot discover what Napoleon was by cutting up his body anatomically, because that human personality known as Napoleon was a living whole, a higher synthesis which we can become aware of only as conscious, sentient beings functioning as a whole ourselves. The moment we try to apprehend it with part of ourselves—with our reason, for example—we lose it.

[Continued on page 240.]

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The vessel brought about 400 First and Second Class passengers, most of whom were bound for France, Switzerland, Germany and England.

The new ship, with her 14,000 tons displacement, has been built with the view of employing her on the famous "Europe-Egypt Express Route de Luxe." She is the latest and fastest of the International boats plying in the Mediterranean, and may be said to represent the very last word in shipbuilding.

The vessel is driven by two screws which lend her a speed of more than 22 knots per hour. She is equipped with a gyroscopic compass, connected with various "tell-tales" on the Captain's bridge, for the better automatic registration of the courses run, and with extra powerful radio-telegraphic transmitting and receiving apparatus, with automatic "S.O.S." signalling gear. The motor-lifeboats have their own radio-telegraphic set. The steam for the powerful turbine engines—each of H.P. 10,000—is produced in boilers at the enormous pressure of Kgs. 28.13, never tried until now in driving apparatus of such immense power.

As far as regards passengers' accommodation, that traditional luxury and elegance for which the "SITMAR" vessels have always been distinguished, has attained to such a standard on the "AUSONIA" that she is on a perfect level with the greatest hotels of world-fame. The vessel is equipped with a luxurious dining saloon, a ball-room and conversation room, ladies' room, smoking saloon, children's room, library, bar, promenades of ample width, verandahs and winter-gardens.

Whilst the Class "De Luxe" and the First Class accommodate the passengers in numerous private suites or in cabins containing 1 or 2 berths, the Second Class and the Intermediate Class offer many cabins with two berths only. Quite an innovation is the circumstance that even the ordinary Third Class Passengers have cabins (and those, too, all outer ones), in glaring contrast to even the most modern steamship.

In addition to all desirable and imaginable comfort, hot and cold running water, baths, heating-apparatus, telephone, hairdresser's and barber's shop, photographer's room, cinema, printer's room, jazz-band, etc.—the "AUSONIA" has a "garage" for the storage of passengers' own cars, not an old corner of the hold, into which the vehicles are introduced by the medium of crane and hatchway, but a real and proper "garage," entered direct from the land by means of a gangway on a level with quay and port, in such a way that the cars can drive straight in.

In view of the addition of the "AUSONIA" to the Line, hitherto worthily represented by her twin-sister the "ESPERIA," the "SITMAR" may be said to be absolutely at the head of the services between Europe and Egypt, and, consequently, between the two Americas and Egypt, as no country on the other side of the Atlantic has a direct line of the kind.



August 12th

There are places
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seen forgathered—at
the Academy in May,
at Ascot in June—or
King's Cross just
before the Twelfth—
going North.

TRAINS FROM KING'S CROSS

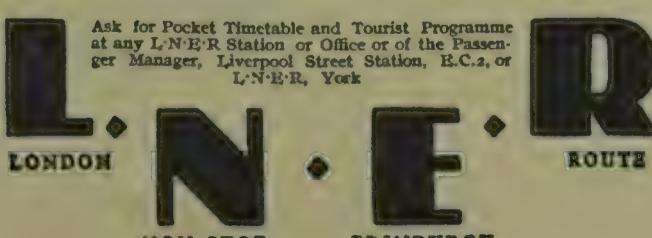
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A.M.	7.25	10.0	10.5	11.15	11.50	1.10
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SLEEPING CAR

P.M.	7.40	10.25	10.35	1.10
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THE CHRONICLE OF THE CAR.

TYRES IN HOT WEATHER—THE 20-H.P. SUNBEAM.

THESE notes are written during the glorious spell of hot weather which began a month or so ago. By the time they appear it is, unfortunately, possible that this stretch of real summer will have come to

A long period of hot weather finds out sooner than anything else the inherent weaknesses of tyres. Ordinary tyre troubles such as we all experienced before the makers learned their long and costly lesson in design and construction are rare now. Within reasonable limits a first-class tyre and its tube will put up with neglect for a surprisingly long time, but in hot weather it is much more subject to failure than at any other time, and considerably more care must be taken of it.

The Toll of the Sun.

Nearly every owner-driver knows that heat and sunlight are bad for rubber, but very few understand (chiefly because nobody attempts to teach them) to what an extent prolonged heat will weaken the resistance of tyre material. In a recent article I quoted (very appropriately, as it has turned out) the conclusion, reached by the Rubber Association of America, that one's normal tyre-life may be reduced, in hot weather, by as much as sixty per cent.

The first rule in hot weather is to take special pains to see that your tyres do not stand in the direct sunlight, and that, so far as is possible,

they are kept as cool as possible at all times when the car is not in use. If you have to leave your car in a sunny place it is well worth while covering the exposed tyres with good thick rugs. It seems absurd to talk in this strain during an English summer, which usually lasts

about three days; but the number of complaints I have heard from all parts of the country this year show that it only needs a real summer to make one's tyres objects of distinct concern.

Inflation and Speed.

The question of inflation becomes important in hot weather, as a tyre which stands at, say, 26 lb. at nine o'clock in the morning may quite easily show over 30 on the pressure gauge after lunch. Over-inflation, which is what this amounts to, is not, in my experience, so fatal to tyre life as under-inflation, but it certainly leads to rapid deterioration, and careful and systematic use of the pressure-gauge—if necessary, every day—is well worth while. A final obvious word of advice—do not drive any faster than you can possibly help, and use your brakes as little as possible. A tyre which has been consistently hot for several hours a day for several days is not a tyre



AN ALL-BRITISH RUNABOUT MOTOR-BOAT: THE "SEACAR" IN A BROADLAND SETTING.

The increasing popularity of fast runabout motor-boats for speed-cruising round our coast, as well as on our inland waterways, has led to foreign-made productions being largely imported. The "Seacar," however, is an all-British-built craft. It is produced by J. W. Brooke and Co., Ltd., of Lowestoft, and has comfortable upholstered cockpits for six to eight persons. The 100-h.p. six-cylinder O. H. V. Brooke engine gives the boat a speed of 30-35 miles per hour. Controls and equipment are on the lines of a car, the latter including electric starting and lighting. The all-mahogany hull is specially built for sea work. The boat sells complete at £750.

an end, and that therefore the subject of tyre troubles, at this moment so terribly important, may have retired temporarily into the background of general discussion. Yet, as our climate is one which induces more hope than that of any other country in the world, it may be that the sun will continue to shine—and our tyres to give trouble.



A STANDARDISED 30-H.P. MOTOR-BOAT ON MOTORISH LINES: THE BROOKE "SEACAR."

with which to take liberties. A good deal of trouble may be avoided by the exercise of a little care and forethought.

[Continued overleaf.]

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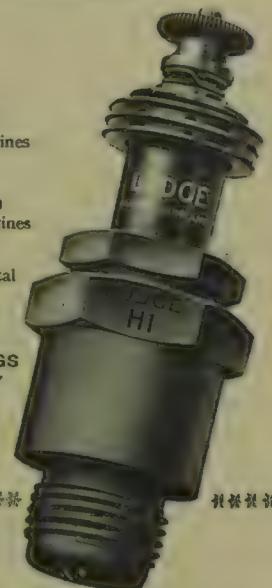
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Continued.]

The 20-h.p.
Sunbeam.

The new 20-h.p. six-cylinder Sunbeam, of which I had an extensive trial a short time ago, is another admirable addition to the list of moderate-powered luxury cars which I am compiling for *The Illustrated London News*. Like the others I have already described on this page, it is the type of car which only a short time ago would probably have cost half as much again, if not more. The Weymann type four-door saloon, which was the one the Sunbeam Company sent me for trial, costs £875, and, considering that the engine is of the same dimensions as that of the celebrated three-litre sports model, and that from end to end the car is a really first-class job, I think it deserves a high place in this very interesting class of fine motor-carriages costing less than £900.

I see by my notes that I gave the Sunbeam full marks for an unusual number of points. The most important of these are the steering, the gear-change, and the gear-box as a whole. The steering is, as it nearly always has been in Sunbeam cars, remarkably light and steady. Indeed, so much confidence do the makers place in this part of the car that no provision has been made for taking up backlash. Similarly, only a very slight effort is necessary to effect swift and noiseless gear changes. In ordinary running over main and secondary roads in the southern counties I found that third speed was competent to deal with practically any but freak hills. For example, I took the Sunbeam up Pebblecombe Hill, which has a maximum gradient of one in six, at a minimum speed of twenty-one miles an hour on this gear. On second speed I should imagine that anything up to one in four could be successfully tackled. Both second and third gears run with a soothing absence of hum.

The Sunbeam is full of life, and it reaches high speeds, such as fifty or sixty miles an hour, with no loss of time. This makes it a particularly comfortable car for a long day's driving. The engine, which has the usual Sunbeam type of overhead valves operated by push-rod and rocker, is beautifully finished, and everything about it really accessibly placed. In fact, I have seldom come across so attractive a piece of

FORGERIES AND THEIR DETECTION.

(Continued from Page 232.)

by criminals. A line or a word is added in the space some people foolishly leave here and there on important papers. This can be detected by microphotographs taken of certain spots where the up and down strokes of letters cross. If a line was written subsequently to the original matter,

the letters cross above the upper or lower line where they touch, and the ink spreads slightly over the dry part; whereas if the words were written in their natural sequence, the tails of such letters as "g" or "p" will always be under the up strokes of the line *below them*. Lately typewriters have come to the front for forgeries; but machines have even more striking characteristics than handwriting, and the fraud is easily detected.

One last word about forgeries. It is an extraordinary thing that no one ever seems to take the trouble to ascertain the composition of the ink with which agreements and cheques are signed, or important documents written. Yet a slight knowledge of the characteristics of this indispensable medium for daily intercourse with our fellows would easily circumvent the cleverest forger. The fact that all inks made of gall, logwood, and iron sulphate can be bleached with ease suggests the obvious precaution everyone should take. When we buy ink we generally prefer a well-known and popular make, quite forgetting that the more popular it is the more easily the forger can obtain the same kind.

Anyone who constantly signs important documents—e.g., banks that deliver letters of credit and so on, should use a special ink which cannot be bleached by alkalis or acids. The paper should be such that a touch of chemical would discolour it or the knife destroy its surface.



OUR "CAR OF THE WEEK": A 20-H.P. SIX-CYLINDER SUNBEAM COACH-BUILT SALOON—
A PHOTOGRAPH TAKEN AT THE RUINS OF LILLESHALL ABBEY.

Lilleshall Abbey, Shropshire, was founded in 1145 by Richard de Belmeis and Philip de Beaumes. After the Dissolution it was purchased by James Leveson, a wealthy wool-stapler, who used it as a private residence. Later, it was the home of that Sir Richard Leveson who fought with Drake against the Armada. The Parliamentary Forces besieged it during the Civil War and reduced it to ruins.

work. It is the kind of engine for which you would like to have a glass bonnet, so that all the world might see what a fine thing it was. The Weymann saloon body is thoroughly comfortable, and, I noticed, particularly quiet at all speeds. JOHN PRIOLEAU.

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THE WORLD OF THE KINEMA.

(Continued from Page 204.)

of imagination, intelligence, and a cogent power of observation no one can deny. Where he has gone wrong in "Underground" is in allowing his desire to break away from the conventional rut of production to obscure not only the details but even the broad outlines of his story. This is particularly noticeable in what should be a praiseworthy shortage of subtitling. But, either from inexperience or the lack of innate ability to see a narrative in the form of consecutive pictures, the absence of explanatory letter-press becomes a glaring fault. At first I found myself comparing "Underground" with King Vidor's masterly production, "The Crowd," and hoping that it might be going to prove an English companion film to the American one, for there were certain points of likeness in the basic conception. But it was not long before these hopes were smothered in a mass of inconsequential detail, disconnected happenings, and improbabilities that left one with a feeling of nervous irritation caused by the unsuccessful effort to follow the thread of what had really occurred. At the close I found myself endorsing the comment of a neighbour: "It is just technique gone mad."

This is not the time to criticise the actual acting. That will come when the film is released. But I may say in advance that here one will be able to give almost unqualified praise. And in the casting of the minor parts Mr. Asquith shows that he has a finely sharpened sense of perception and judgment. He has kept, too, his distinctive and telling ability in the use of inanimate objects as a means of expressionism and symbolism, which he employed with such remarkably artistic and penetrating effect in "Shooting Stars." And he undoubtedly has the power to make the actors under his direction reproduce exactly what he is striving to attain by methods that have the qualities of subtlety and restraint. At present his strength is often his weakness, and he is far too much concerned with the means rather than with the end. Mr. Karl Fischer's lighting was a constant joy; to him one can but award the word "genius." If Mr. Asquith will but strive to forget his own cleverness and sit yet a little longer at the feet of some American and more than one Continental producer, he and

Mr. Karl Fischer, in combination, should be able to produce a film that will be as epoch-making as "Underground" is disappointing.

CHESS.

CONDUCTED BY ERNEST IRVING.

To CORRESPONDENTS.—Letters intended for this department should be addressed to the Chess Editor, 15, Essex Street, Strand, W.C.2.

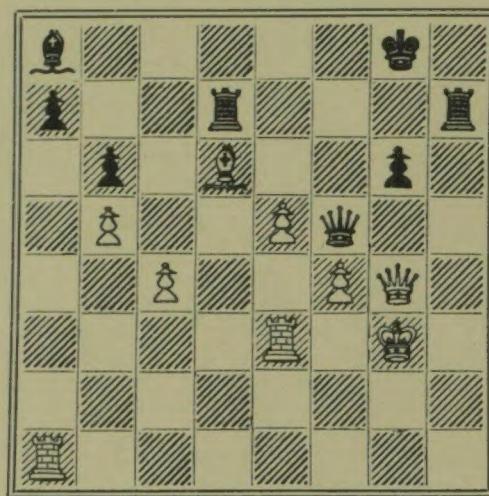
SOLUTION OF GAME PROBLEM No. VI.

[5Sik; 6pp; 8; 6s1; 4Q3; 2Q4P; 1B4Bt; 7K—White to play and win.]

What White did not see, and one or two of our strong solvers did not see either, was 1. Q×P, K×Q; 2. KtKt6ch, KKt1; 3. BQ5!, when, as a tropical solver suggests, Black's best move is probably to the bar! The position is almost identical with a problem in one of Mr. Alain White's collections; but it occurred in a genuine game, sent for adjudication, as stated.

GAME PROBLEM No. VIII.

BLACK (8 pieces).



WHITE (9 pieces).

In Forsyth Notation: b5kr; p2r3r; 1p1B2p1; 1P2Pq2; 2P2PQr; 4R1Kt1; 8; R7.

This is a position from a game in the major open tourney at Tenby. It was Black's turn to make his 41st move, and the game was continued: 41. — QB7; 42. QK2, QB4; 43. QK2, QB4. Neither party could find any promising alternative, and the game was left drawn. Now this was a stroke of luck for White, as Black had at

his disposal a move that won off-hand in each of some pretty variations. What should Black have done? 70% for Black's best move 41; 30% for the variations, particularly the defence 42. RKKt1.

ANSWERS TO CORRESPONDENTS.

ANTONIO FERREIRA (Porto).—Your earlier solutions were delayed in the post.

A EDMESTON (Llandudno).—It is quite certain that Lasker saw right through to the mate before he played Q×P. Alekhin once made a sacrificial combination over 20 moves in length!

F R GITTINS.—We have looked twice at the "Problem" and "Game," and tried to smile.

FR. FIX (Wiesbaden).—Not at all! The pawn on b3 in No. 4031 is needed to hold c4 after 1. — K×B, when the Q administers a pure mate at f5.

CHAS. WILLING (Philadelphia) and A EDMESTON.—The alternative line 4. PBAch in Game Problem No. V. involves Casting in one variation. You do not demonstrate the possibility of this; but it may be shown that the White Q, Kts, Bs, and Ps have made nine moves, and that, consequently, neither K nor R can have moved. L HOMER (Toulon).—No 4031 is not so unsophisticated as you think! BK4 is insufficient because of P×P! and all the pieces have their offices.

CORRECT SOLUTION OF GAME PROBLEM No. V. from L Homer (Toulon) (70%—there is no mate in 6b); No. VI, from J Montgomerie (Edinburgh), L Homer (Toulon), W Siebenhaar (Ormea); and of No. VII, from J Montgomerie, H Goldstein (Crumpsall), G W Middleton (Moxbrough).

CORRECT SOLUTION OF PROBLEM No. 4028 from Geo. Parbury (Singapore); of No. 4029 from K D W Boissevain (Geneva); of No. 4030 from John Hannan (Newburgh, N.Y.); Charles Willing (Philadelphia); of No. 4031 from E J Gibbs (London).

THE WORLD OF MUSIC.—(Continued from Page 234.)

So in music, when we analyse a fugue into its parts, it ceases for the time being to be music, just as a poem ceases to be a poem for the grammarian who takes it to pieces. The famous mathematician Leibnitz described music as "an unconscious counting," and no doubt this, like many other definitions, is partly true; but Mr. Gray quite rightly points out that the more knowledge and understanding of music we have, the less easily are we satisfied with any definition.

To define music adequately would be to know all the music that has been written and all the music that ever will be written. Without that knowledge no comprehensive definition of music can be made. But a great deal of light is thrown upon the complex nature of music by the study of all that has been thought on the subject, and Mr. Gray's chapter is an able survey of past thought.

W. J. TURNER.

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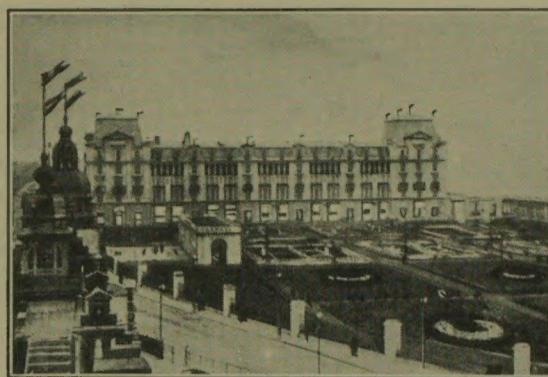
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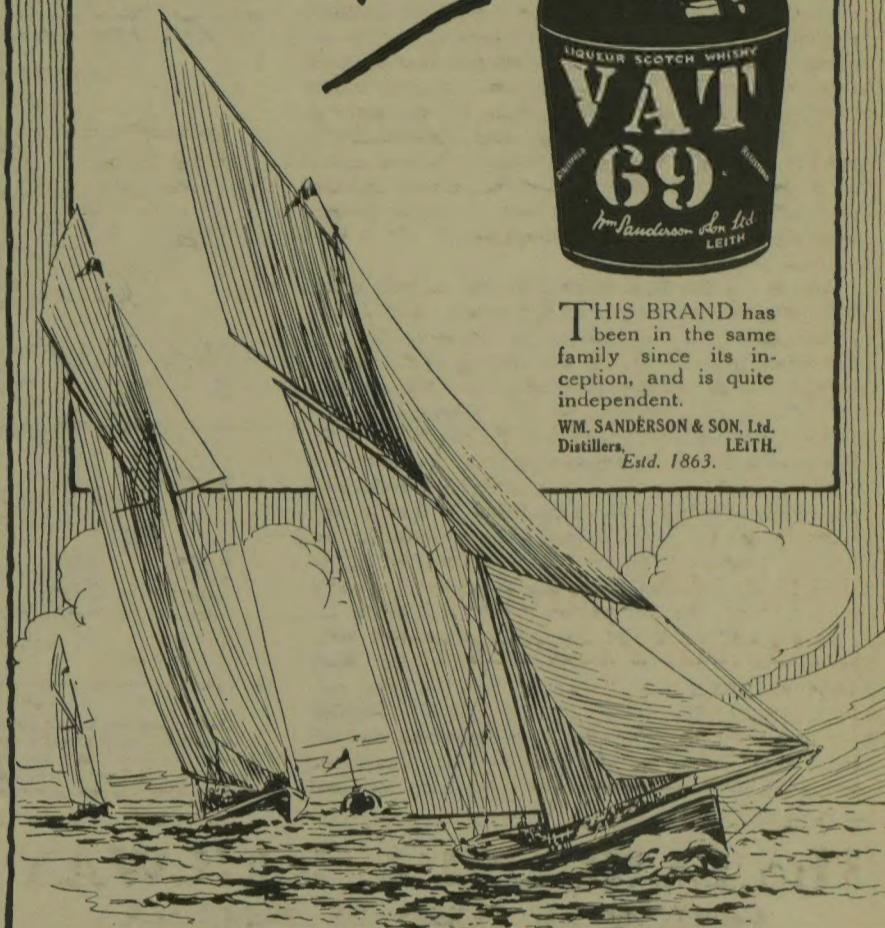
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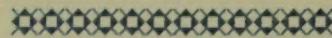
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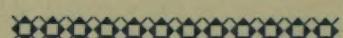
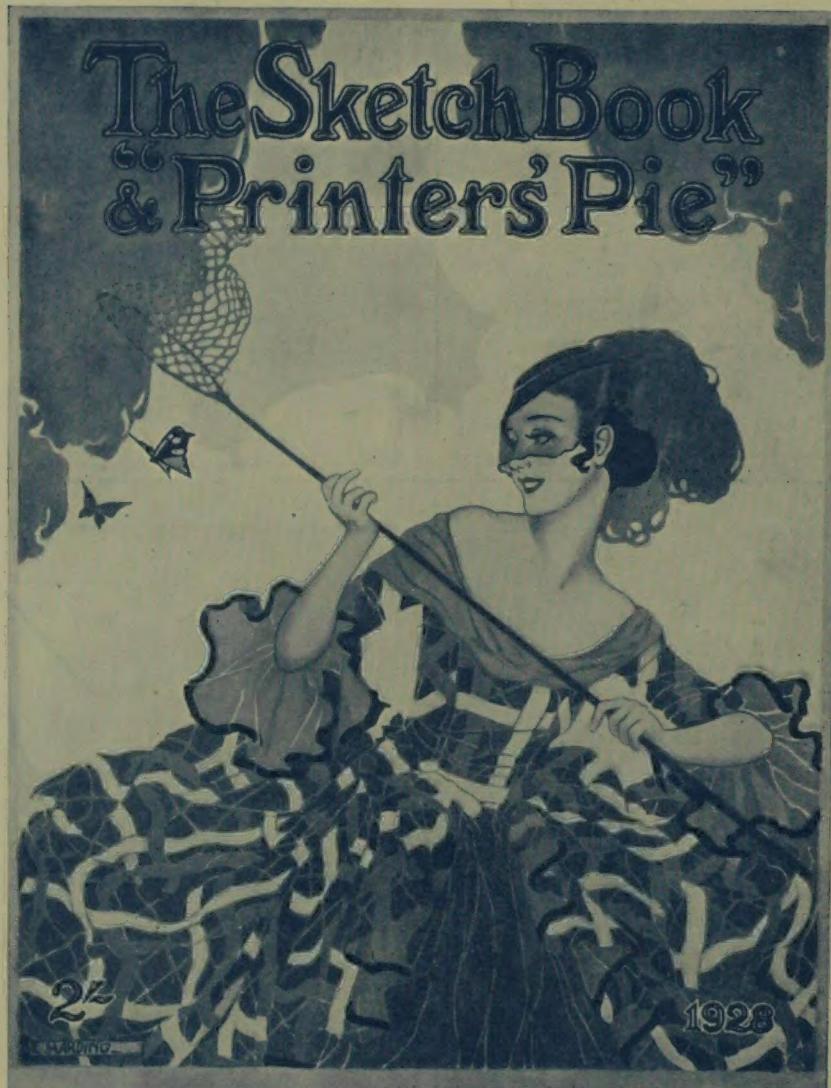
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